

**THE RAILWAY GAZETTE**

A Journal of Management, Engineering and Operation  
INCORPORATING

Railway Engineer • TRANSPORT • The Railway News  
The Railway Times Herapath's Railway Journal • RAILWAY RECORD.  
RAILWAYS • ESTABLISHED 1835 • THE RAILWAY OFFICIAL GAZETTE

PUBLISHED EVERY FRIDAY

AT  
33, TOTHILL STREET, WESTMINSTER, LONDON, S.W.1Telegraphic Address: "TRAZETTE PARL., LONDON"  
Telephone No.: WHITEHALL 9233 (6 lines)Annual subscription payable in advance and postage free:  
British Isles and Abroad ..... £2 5s. 0d.  
Single Copies ..... One Shilling  
Registered at the General Post Office, London, as a Newspaper

VOL. 70. No. 9

FRIDAY, MARCH 3, 1939

**CONTENTS**

	PAGE
Editorials .. .. .	337
Letters to the Editor .. .. .	343
Publications Received .. .. .	344
The Scrap Heap .. .. .	345
Overseas Railway Affairs .. .. .	346
Projected St. Albans Railway of 1817 .. .. .	348
Train-Lighting Generator Transmission .. .. .	349
The Millwall Extension Railway .. .. .	351
New Beyer-Garratt Locomotives for the Ivory Coast .. .. .	352
Reflooring a Road-Rail Bridge in India .. .. .	354
Long Rail Welding .. .. .	357
Sir Ralph Wedgwood .. .. .	362

**ELECTRIC RAILWAY TRACTION**

*A Supplement illustrating and describing developments in Electric Railway Traction is presented with every copy of this week's issue*

**Railway Wage Decision**

THE decision of the Railway Staff National Tribunal on the claims recently presented to it by the three railway trade unions has now been published, and a summary of the tribunal's findings is published on pages 385-8. The tribunal has found against the whole of the claims presented by the Associated Society of Locomotive Engineers & Firemen and the Railway Clerks' Association, and on only two of the claims submitted by the National Union of Railwaymen has it made an award in favour of the union. On the claim that all staff in salaried and conciliation grades shall be paid a minimum of four hours at the Sunday rates for each time of signing on duty on Sundays, the tribunal has increased the present minimum payment to three hours at the Sunday rate, and on the claim for the termination of spreadover working the tribunal has confirmed the companies' right to arrange spreadovers up to 10 hours a day, which may be extended to 12 hours in cases where the difficulties of arranging the work are such as to make a spreadover beyond 10 hours necessary as the alternative to an unjustifiable waste of time and expenditure, unless the hardship or inconvenience to the staff is so great as to outweigh the economy to be gained. The Decision remarks that the claims need obviously to be considered in relation to the financial position and prospects of the railways, and on this it states that it is not to be expected that a tribunal which, less than two years ago secured the maxi-

mum improvement that then seemed justified, should feel able now to recommend large additional concessions at a time when the financial position and prospects are very much worse. It is largely on these grounds that the tribunal has found against the majority of the claims, although in connection with the claims for changes in conditions of working or payment in special cases, the tribunal states that it is on their intrinsic merits and on the principles enunciated in 1937 that these claims have been considered.

\* \* \* \*

**"Square Deal" Developments**

During the past week the railway companies reached an agreement with the Dock & Harbour Authorities' Association regarding the conditions under which the latter would support the companies' claim for equality with other forms of transport in the matter of the statutory control of their charges for the conveyance of merchandise, and a joint memorandum to the Transport Advisory Council was signed on February 24. Further discussions with the agricultural interests have also had a successful issue, and on February 28 a joint memorandum to the council was signed on behalf of the railways and the agricultural sub-committee. Discussions have also been continued energetically with the Traders' Co-ordinating Committee, which represents over fifty of the national trading organisations, and it is now possible that a basis of agreement will be reached within the next few days. The special committee of the Transport Advisory Council met on March 1, 2 and 3 for the purpose of considering the various agreed memoranda which have now been presented to them and also the separate memoranda prepared by the railway companies and the Mining Association, after which they will proceed with framing their conclusions and recommendations for the full council.

\* \* \* \*

**The Week's Traffics**

At this time a year ago the merchandise traffics of the four main-line railways began to show signs of falling off, and in the 8th week of 1938 merchandise receipts were down £27,500, although coal earnings were up £37,500, and passenger train takings were up £4,000. Last week the total decrease in comparison with the 8th week of 1938 was £136,000, against a decrease in the previous week of £96,000. To date the total earnings in 1939 are £21,749,000, a decrease of £1,488,000 or 6.40 per cent. in comparison with 1938.

	8th Week			Year to date		
	Pass., &c.	Goods, &c.	Total	Inc. or Dec.	£	%
L.M.S.R. ..	9,000	30,000	12,000	51,000	595,000	6.30
L.N.E.R. ..	3,000	38,000	14,000	55,000	574,000	8.17
G.W.R. ..	—	2,000	17,000	19,000	258,000	6.61
S.R. ..	3,000	3,500	4,500	11,000	61,000	2.13

London Transport receipts for the past week showed an improvement of £6,800, and the total for the 35 weeks is £19,829,400, an increase of £208,000. Great Northern (Ireland) takings for the week are £1,300 up, and to date there is a net improvement of £5,750, with goods receipts £6,950 higher and passenger receipts £1,200 lower.

\* \* \* \*

**"Fighting for Freedom" Exhibition**

A new form of publicity for the railway companies' "square deal" campaign was introduced on February 27, when Mr. Eric Gore-Browne, Deputy Chairman of the Southern Railway, opened a "Fighting for Freedom" exhibition at Waterloo station. The exhibition, described on page 390, is contained in a temporary wooden building covering 900 sq. ft., which has been erected in the main hall of the station. It consists of a number of

sections in which are demonstrated by means of photographs, explanatory notices, "cut-out" figures, and so on, regulations to which the railways are subjected and the varied public and national service they perform in spite of their handicaps. That they cannot continue to do so indefinitely under present conditions is suggested by a picture of the entrance to the Bankruptcy Court. The exhibition is remarkable for the manner in which the use of angles, curved walls, partitions, and other measures has enabled such an amount and variety of material to be assembled in such a small space and in a manner which enables the visitor to give full attention to each section without seeing too much at once. After March 11 it is proposed to transfer the exhibition to provincial centres, where, judging from the interest already aroused, it should attract considerable attention.

\* \* \* \*

### The L.M.S.R. Meeting

Lord Stamp at the meeting of the London Midland & Scottish Railway Company last Friday fully explained the causes of the heavy fall of £3,402,742 in gross receipts from the railway and ancillary businesses during the year 1938. These were a sharp recession in trade since March, which was accentuated by the international situation, and a further diversion of certain classes of merchandise traffic to other forms of transport, coupled with reductions of rates for vulnerable traffic retained. The one satisfactory feature in the earnings was the further growth in passenger receipts from long-distance traffic. Notwithstanding an all-over increase of £1,400,000 in prices and wage rates, expenditure on the railway and ancillary businesses as a whole was reduced by £340,000. The decline of £3,010,756 in net revenue, unfortunately, made it impossible to pay anything on the £135,336,428 of capital representing the 4 per cent. preference stock (1923) and the ordinary stock, on which together dividends were paid in 1937 amounting to £3,033,396. Most of the stockholders who spoke at the meeting were, in consequence, in a blindly critical mood. While calling attention to the remarkable savings which had been brought about over a series of years, the Chairman assured the meeting that although the pace in effecting economies in controllable expenditure might now be slower, the management had not reached finality in this direction.

\* \* \* \*

### Northern Counties Committee (L.M.S.R.)

Failure of interest on Northern Ireland Road Transport Board stocks, which paid £6,858 in 1937, was the main reason why the results for 1938 showed a loss of £4,726, compared with a profit of £2,374 in 1937. The loss on railway working was £19,301, against £14,855 in 1937, but net receipts from hotels, &c., improved from £6,144 to £7,303. Miscellaneous receipts (net) were £3,814 lower. In the railway passenger receipts of £170,219 there was a decrease of £1,672, but parcels and mails (£62,723) brought in £697 more. Goods train traffic receipts were £137,964, a decrease of £16,741, to which all heads of traffic contributed.

	1936	1937	1938
Capital expenditure .. ..	3,747,214	3,750,044	3,779,004
Gross receipts from businesses ..	461,441	469,338	450,453
Revenue expenditure on ditto ..	465,365	478,049	462,451
Net receipts of ditto .. ..	Dr. 3,924	Dr. 8,711	Dr. 11,998
Miscellaneous receipts, net .. ..	15,048	12,327	8,513
Total net income .. ..	11,124	3,616	Dr. 3,485
Interest, rentals, &c. .. ..	1,242	1,242	1,241
Appropriated for interest on capital .. ..	9,882	2,374	—

Total traffic expenditure was reduced from £404,591 to £393,088, and total railway expenditure from £409,370 to £395,827.

### Three Railway Companies in 1½ miles

To those who specialise in collecting railway tickets, a happy hunting ground was formerly provided by the Millwall Extension Railway, which forms the subject of a short article on page 351. In the early years of the present century, specimens of the tickets of three companies could be obtained at successive stations all within the space of 1½ miles. The termini—Millwall Junction and North Greenwich respectively—were both owned by the London & Blackwall Railway Company, but as this company was worked by the old Great Eastern Railway, it was the G.E.R. type of ticket which was issued at them. South Docks station was on the 41-chain section owned by the London & Indian Docks Company and tickets were headed accordingly. Similarly, the tickets issued at Millwall Docks (Glengall Road) station bore the name of the Millwall Docks Company, as that station was on the 52-chain section in the ownership of that company. Dock grouping in 1909 brought both undertakings into the hands of the Port of London Authority, and tickets issued at the intermediate stations were then headed accordingly.

\* \* \* \*

### Argentine Railway Statistics, 1937

The annual report of the *Instituto de Estudios Economicos del Transporte*, recently published in Buenos Aires, contains full statistics relating to the working of the Argentine railways for the year 1937, with comparative figures for several previous years. The following table contains the principal operating statistics for the whole of the system, including both privately-owned, State-owned, and provincial lines, with the comparative figures for 1936:—

	1936	1937
Passengers, number .. ..	139,289,665	153,108,843
Passenger-km. (thousands) ..	3,865,441	4,198,104
Goods, tons .. ..	44,899,285	49,042,342
Goods ton-km. (thousands) ..	12,047,754	13,143,239
	pesos, m/n.	pesos, m/n.
Passenger receipts .. ..	99,199,000	99,721,000
Goods receipts .. ..	354,024,000	381,236,000
Gross earnings .. ..	501,240,000	536,783,000

Of the total revenue freight traffic, namely, 44,400,000 tons, 15,959,000 tons consisted of cereals. The number of employees of all grades in 1937 was 133,931, and salaries and wages, amounting to 276 million pesos, accounted for 65.8 per cent. of the total working expenditure. The total capital invested in the railways is given as 4,576,586,000 pesos, and the net receipts for 1937 represented 2.57 per cent. on that total.

\* \* \* \*

### Londonderry & Lough Swilly Railway Company

Road transport is now the principal business carried on by this company, and the gross receipts from this source in 1938 were £65,012, an increase of £203 on those of 1937. Passenger road services brought in £44,898, an increase of £905, but the goods road receipts of £20,114 were £702 lower. Road transport net receipts improved from £2,461 to £2,611. Railway gross receipts (£20,758) were down £1,300, with decreases both in passenger and in goods train traffics, and the loss on railway working rose from £3,715 to £4,539. Some comparative figures for the past three years are given in the following table:—

	1936	1937	1938
Gross receipts from businesses ..	85,278	87,311	86,217
Expenditure .. ..	83,910	88,691	88,170
Net receipts .. ..	1,368	Dr. 1,380	Dr. 1,953
Miscellaneous receipts (net) ..	3,882	3,607	3,633
Total net income .. ..	5,250	2,227	1,680

The final result of the year's working in all departments was a debit of £3,353.

### Santa Fe Adopts the Fourth Signalling Aspect

For many years the Atchison, Topeka and Santa Fe Railroad had one of the simplest systems of signal aspects known, contenting itself with a one-armed 3-position semaphore for all purposes, including signalling at junctions. This policy was based on the advice of a former Signal Engineer, T. S. Stevens—an Englishman by birth—who took a prominent part in the debates that led up to the three schemes of signal aspects recommended many years ago by the then Railway Signal Association, now part of the Association of American Railroads. This meant giving the 45-deg. aspect and yellow light a somewhat wide meaning, the Santa Fe administration even going so far as to make that the most restrictive indication given by certain signals on heavy rising gradients, to keep trains on the move. Now, however, it is announced that, to cope with higher speeds a fourth aspect is being adopted on some sections of the line, so as to provide longer warning of the approach to a stop signal, and give more logical indications than is possible by merely repeating the "caution," aspect again at the second signal in rear, a method often seen at one time but involving an inherent contradiction.

\* \* \* \*

### The Key to Acceleration

In the discussion on Mr. S. H. Fisher's paper entitled "Acceleration of Train Services," read before the Institute of Transport on December 12 and briefly reviewed in our issue of December 16, a speaker pointed out that credit was due to the G.W.R. for having been the first railway in Great Britain to introduce mile-a-minute travel on an extensive scale in this country. He added that in doing so the Great Western management had been under no small debt to their Chief Mechanical Engineer at that time—the late George Jackson Churchward—for having provided them with locomotives capable of maintaining, with efficiency and economy, high speeds over long distances continuously. Churchward's advocacy of short cut-off and full regulator working, which he made possible with 225 lb. boiler pressures, long valve-travels and large ports, was the fruit of a close study of every detail of front end design, and was developed in a day when 180 lb. pressures were the general rule elsewhere, and the fierce blast obtainable from small blast orifices and lengthened cut-offs was often—at the expense of coal consumption—the only approach possible to adequate steaming. The locomotive exchanges of 1925 and 1926, in which G.W.R. "Castles" ran over L.N.E.R. and L.M.S.R. metals, amply proved the success of Swindon policy, and the results are well known. Indeed, there are few, if any, locomotive engineers of a past generation who have influenced British locomotive practice in so marked a degree as Churchward, and the naming of a modern Great Western locomotive after him similarly to the recent commemoration of his predecessors Brunel and Gooch, would be welcomed by many.

\* \* \* \*

### A Movable Roadway for Crossings

Herr Bastgen, of Kochem, has introduced a method of making the road surfaceway at level crossings movable, to facilitate maintenance work, both on road surface and permanent way. The idea is being tried on the Reichsbahn, which has some 75,000 crossings, not counting those of Austria and other recently-acquired territory, the upkeep on which amounts to a considerable figure. Instead of the road surface being paved-in on the crossing in the customary manner, it is inserted in a movable framework made in sections and provided with roller guides. This

enables it to slide along the permanent way clear of the crossing when the rollers are unlocked and put in action by special handles, and permits the track to be quickly and easily exposed for inspection, while the road traffic can continue to pass over the unremoved sections of paving. Any of the latter can be readily renewed, as they can be made up to standard designs in advance, and thus renewal of paving work on the crossing itself, with its known inconvenience, does not require to be done. A good surface is also more easily obtained. A description of the arrangement appears in the *Bahn-Ingenieur* of November 13, 1938.

\* \* \* \*

### Locomotive Tyre Fractures

Among numerous points raised in the discussion of a paper by Mr. T. Baldwin entitled "The Fatigue Strength of Machined Tyre Steels," at a meeting of the Institution of Locomotive Engineers, was that of the direction taken by certain classes of fractures, i.e., from the outside or from the inside. In dealing with this point, the author said that he could understand that in the case of small wheels, fatigue flaws from the bore were almost non-existent; it was really the big driving wheels which gave the trouble. In his experience there had been no cases of flaws in locomotive wheels from the tread except where there was a defect on the tread itself. Abrasion gave rise to transverse cracks very similar to those due to machining, and presumably the braking stresses, which were severe on the flange owing to the small area in relation to the surface braked, caused these cracks to develop by fatiguing action. Alternatively, thermal stresses might be responsible for the development of the flaws, and the author expressed the view that it was advisable to keep the brakes off the flange if at all possible. Another point debated was that of tyre fastenings, and in this connection the author expressed the view that the real reason for using them was to prevent a tyre slipping round on the wheel centre. In cases of rough machining on the bore it was possible for the tyre bore to become so slack that the shrinkage was almost lost owing to corrosion, and the view taken was that a fastening of some sort was probably advisable in such cases.

\* \* \* \*

### Non-Talking Carriages

After hearing the travelling Briton so often criticised for his speechlessness, it was a surprise to get a plea from a correspondent for "non-talking" carriages, in which lovers of silence could be insulated from his alleged idle chatter. Our correspondent is one of the many who must spend some two hours daily in travelling to and from work and wishes to "obtain a dividend" on the time thus occupied. Numerous persons so placed seem able to develop a faculty of sinking into a temporary coma in which dividends cease from troubling and nothing short of a discharge of cannon can disturb their serenity. With a little practice, the passenger thus not only becomes able to ignore diversions in his compartment, but assumes a mummified appearance discouraging to the most infatuated conversationalist. Are the numbers of those unable to practise such isolationism sufficient to warrant creating another class of compartment for their segregation? We already have smoking carriages, non-smoking carriages, and carriages for ladies only. Further concessions to individualism might lead the gentlemen to demand separation of pipe, cigar, and cigarette smokers; the ladies to ask for division into blondes and brunettes; and the non-talkers to exact differentiation between those who sit and think, and those who just sit.



### Sir Ralph Wedgwood

**G**ROUPING under the Railways Act, 1921, brought into being the four main-line railway companies of Great Britain, and at the time many thought that there was little to choose between this scheme and one for the establishment of a great national transport corporation, bringing under one ownership all the railways of the country. The four group railway companies were formed at the beginning of 1923 and now that 16 years have elapsed it is obvious even to the least observant that each of the four group railways has developed and preserved an individuality. To what extent this has resulted from traffic and geographical conditions and how far from the impress of the personalities of the respective chiefs, future historians must decide, but beyond all question, those general managers who were appointed at the time of grouping left their mark on the organisation that was evolved. Particularly does this apply to Sir Ralph Wedgwood who for 16 years has controlled as Chief General Manager the affairs of the London & North Eastern Railway Company. The main facts of his career are outlined in an article on page 362, but comparatively few are in possession of sufficient knowledge to make adequate deductions from these bald statements. One of the few is Mr. Oscar H. Corble whose position as Assistant to the Chief General Manager and Industrial Agent, L.N.E.R., has enabled him to pay the deserved tribute in the current issue of the *L.N.E.R. Magazine* that "there were many railway officers who, in the early days of 1923, were called upon to face new and heavy responsibilities, but none had to grapple with a harder task than the man who was appointed to weld into one organisation the numerous elements comprising the London & North Eastern group and, during the difficult years that lay ahead, to fill its chief executive post. On this work Sir Ralph brought to bear a vast amount of railway experience, coupled with a shrewd knowledge of men and affairs, and, with endless patience and consideration for the views of other people, he gradually created an efficient system of management."

Sir Ralph Wedgwood entered the service of the former North Eastern Railway in September, 1896, at the age of 22 under Sir George Gibb, and at York he took a hand in the staff work entailed by the famous award of Lord James of Hereford. In 1898, however, he was transferred to West Hartlepool and served in the Dock Superintendent's office for some years, latterly as Assistant Dock Superintendent. Here the older employees still remember him as a man of remarkable energy and enthusiasm. The beginning of 1902 brought him his first independent office as District Superintendent, Middlesbrough, and two years later he served for a short time as Secretary to the company in succession to Mr. C. N. Wilkinson. It must be assumed that the comparative tranquility of this office ill accorded with his own physical energy, for it was at his own request that he returned to traffic work and secured the appointment in October, 1905, as Northern Divisional Goods Manager with headquarters at Newcastle. Six years later he became Assistant Goods Manager with headquarters at York and shortly afterwards succeeded Sir Eric Geddes as Chief Goods Manager when the latter became Deputy General Manager. To this work he added the responsibility of controlling the Passenger Department after the retirement of Mr. Philip Burt.

On the outbreak of war Sir Ralph Wedgwood volunteered for army service abroad and for a time acted as D.A.D.R.T. in the Transport Establishment in France. More important war work, however, began in October, 1916, when he became Director of Docks under Sir Eric Geddes (then Director of Transportation) with the temporary rank of Brigadier General. With a staff of

specialists which he gathered round him at his headquarters at Montheith, General Wedgwood worked out an organisation to overcome the difficulties in the transport arrangements which were arising from the serious congestion at the Channel ports. His complete mastery of every detail of the work, his diplomacy in handling naval and military departments, as well as port and railway officials, together with his command of the French language, were potent factors in ultimately securing the smooth and entirely successful working of a complex organisation. Both his earlier work on the North Eastern Railway and his activities during the war had shown him to be a man with a great capacity for work and possessed with the determination to get to the bottom of every problem presented to him. The passage of years has but served to emphasise these characteristics by which probably he will be best remembered among those actively associated with him. A much wider circle has had the opportunity of appreciating his courtesy and charm of manner. He returned to the North Eastern Railway in June, 1919, and two months later became Deputy General Manager whilst still retaining the position of Chief Goods Manager and Passenger Manager. It was obvious, therefore, that no man was more fitted by training and ability than Sir Ralph Wedgwood to succeed Sir Alexander Kaye Butterworth as General Manager of the North Eastern Railway on January 1, 1922.

Just a year later the London & North Eastern Railway came into being as the result of grouping, and the prominent part which Sir Ralph Wedgwood had taken in connection with the passing of the Railways Act, 1921, left no doubt as to his suitability for the high office of Chief General Manager of the new undertaking. Unlike the other main-line railway companies, the L.N.E.R. adopted a divisional system of management with divisional managers in charge of group areas corresponding approximately to one or more of the separate pre-grouping railways. Sir Ralph Wedgwood thus became the only railway officer in Great Britain bearing the title of Chief General Manager. The size of the new company did not deter him from his close attention to detailed work and it may be said that no large scheme of improvement whether relating to a goods yard, a locomotive depot, a dock or a passenger station received approval without a personal visit of inspection, which frequently resulted in detailed suggestions. Despite this, his physical energy never flagged and when Sir Ralph Wedgwood states that his favourite recreation is walking, it means that he has pursued this interest to the extent of having explored practically every field path or country lane in the home counties in the course of his Saturday afternoon rambles. His vitality was subjected to a severe strain during his long illness in 1933, but happily he completely recovered.

The benefit of Sir Ralph Wedgwood's advice and experience has been freely sought in various public matters. He was, for example, a member of the Weir Committee on main-line electrification in 1930-31 and has been for some years a member of the Central Electricity Board and the Chinese Government Purchasing Commission. In 1936 he was invited to visit India as Chairman of the committee of inquiry into the Indian railways. As recently as November last and within a few months of laying down the task of management, Sir Ralph Wedgwood undertook the direction of the "square deal" campaign, and has taken a leading part in the resultant negotiations. This work, at the urgent and unanimous request of the boards of the four main-line companies, he has agreed to see to a conclusion on behalf of the Railway Companies' Association. It is typical of the energy with which he has tackled railway problems throughout his career that in his farewell message to the staff, reproduced on page 365,



he should ask to be spared the wishes of leisure and repose customary to the occasion. "There is so much to be done and the urgent need to do it," writes Sir Ralph Wedgwood in that message. If we may not wish him the quietude he has earned, we can at least join our hopes to those of many others that his efforts on behalf of all the railways will be crowned with the same success, and marked by the same adaptability to changing conditions, as characterised his direction of the affairs of his own company. It cannot be forgotten that it was on the L.N.E.R. under Sir Ralph Wedgwood that the first British high-speed streamlined train was introduced, designed by Sir Nigel Gresley. The Silver Jubilee was the first experiment in providing a train specially designed from the locomotive to the last coach to run long distances in the higher ranges of speed, and its introduction may be considered a compliment to the work already performed on the Great Western Railway in demonstrating the appeal of speed by setting a high general average for its passenger services. The Silver Jubilee was soon followed by similar services, to cater for the demand arising as soon as members of the public perceived that rail transport could provide all they required in the way of modernity and speed, and began to associate speed in their minds with a special degree of comfort departing from conventional railway carriage standards. Perhaps it will now be reserved for Sir Ralph Wedgwood to free the railways from shackles more cumbersome and firmly riveted than those of tradition, so that they can show themselves as fertile in invention in improving goods facilities as in the last few years they have been with their passenger services.

\* \* \* \*

### Conveyance of Iron and Steel Traffic

THE Ministry of Transport has recently published some statistics showing the results of the ton-miling of certain classes of iron and steel traffic conveyed over the British main-line railways during March of last year. Ton-mile statistics for these traffics were last taken out for one week in March, 1928, and as the companies frequently convey over 25,000,000 tons of iron and steel annually, a comparison of the figures is of more than passing interest. In the case of iron and steel in Class 6 of the general railway classification, which includes such traffics as blooms, billets and ingots, 339,206 tons were conveyed in March, 1938, in lots of six tons and upwards, invoiced at station-to-station rates. The statistics show that the average gross receipts per ton-mile by the four main-line companies from these traffics declined from 155d. in 1928 to 134d. in 1938, but on the other hand the average gross receipts per ton in 1938 were 7s., an increase of 1s. over 1928, due principally to the average length of haul increasing from 46.39 to 62.37 miles in 1938, and to a minor degree to the 5 per cent. increase in rates which became operative as from October, 1937. The longer haul was most marked in the case of the G.W.R., where it increased from 24.70 miles in 1928 to 35.56 miles in March last; on the L.M.S.R. the increase was from 53.05 to 71.84 miles. The experience of the companies was not consistent, however, as on the L.N.E.R. the average length of haul of 65.83 miles in 1938 represented a very slight decrease as compared with ten years previously.

Under iron and steel in Class 7, list "K" of the classification, which includes such articles as girders, boiler plates, and steel rails, 589,234 tons were conveyed in March last in four-ton lots and upwards, invoiced at station-to-station rates. The same general tendency is evident in regard to the level of rates, as the average gross receipts per ton-mile for 1938 were 1.69d., a decrease of 0.20d. compared with 1928. The average gross receipts

per ton, however, were 12s. 2d. in 1938, an increase of 2s. 5d. a ton over 1928, due mainly to the average length of haul increasing from 61.76 to 86.54 miles. The alteration in the flow of the traffic was again most pronounced in the case of the G.W.R., where the average length of haul rose from 45.58 miles in 1928 to 91.44 miles this year, and as the average gross receipts per ton-mile decreased in the same year from 2.09d. to 1.71d., the average gross receipts per ton showed an increase from 7s. 11d. to 13s. 1d. On the L.M.S.R. the average gross receipts per ton-mile declined from 1.89d. in 1928 to 1.77d. in 1938, but as the length of haul rose from 65.61 miles to 78.66 miles, the average gross receipts per ton increased in 1938 by 1s. 3d. to 11s. 7d. per ton. In the case of the L.N.E.R., which conveyed the largest tonnage—273,026 tons—the average gross receipts per ton-mile declined from 1.81d. in 1928 to 1.63d. in 1938, but owing to the average length of haul rising from 66.26 to 91.93 miles, the average receipts per ton in 1938 were 12s. 6d., an increase of 2s. 6d. a ton over 1928.

Somewhat similar trends, although not so pronounced, are revealed by the figures for iron and steel in Class "L" of the classification. A much smaller tonnage of this traffic, which includes such material as castings, forgings, carriage and wagon work, was conveyed in March, 1938, namely, 31,623 tons. The average gross receipts per ton-mile for the four main-line companies during last March were 1.84d., a decrease of 0.07d. as compared with 1928, while the average gross receipts per ton increased by 1s. 8d. to 15s. in 1938 owing to the average length of haul rising from 83.76 miles to 97.63 miles. The G.W.R. figures are again noticeable as showing the greatest variation from 1928, as the average gross receipts per ton-mile declined from 2.01d. to 1.88d. between those years, but owing to the length of haul increasing from 63.40 to 91.74 miles in the same period, the average rate per ton increased by 3s. 10d. to 14s. 5d. in 1938. Comparatively little variation occurred on the L.N.E.R., but the average gross receipts per ton in respect of traffic carried over the L.M.S.R. declined from 1.96d. to 1.85d., while the average length of haul increased from 87.56 miles to 102.41 miles, which resulted in the average gross receipts per ton increasing from 14s. 4d. in 1928 to 15s. 10d. a ton in March of last year.

\* \* \* \*

### Light Signals

THE origin of the light signal may in one sense be said to go back to the time when it first became necessary to fix a signal in a tunnel, where, the other types of signal—semaphore, disc, and so on—being impracticable, reliance had to be placed on indications given by lights. This involved a system of aspects constant throughout the twenty-four hours. Probably the first example of the extensive use of such signals was provided by the London Metropolitan Railway, the first section of which was opened in 1863. Many of the signals were necessarily in the tunnels, and even in the stations where semaphores were used as starting signals, the signal lamps were nearly always burning as a supplementary indication. The tunnel signals consisted of lamps and mechanical spectacle mechanisms operated by wire from the signal box in the same way as the semaphores. Austin Chambers, who for some time had charge of the signalling on the line, experimented with and patented a number of pneumatic signal movements, some of which were installed in regular service. Among these was a tunnel signal consisting of bellows, inflated by pulling the lever in the box, which raised a screen containing coloured glasses in front of a gas burner. These devices do not appear to have come

into general use on the railway. The visibility of the signals in the Metropolitan tunnels was very good, considering the unfavourable atmospheric conditions, probably on account of the generous gas jets used with them. Other steam lines had, of course, to use substantially similar apparatus, but the main lines avoided placing signals in tunnels as far as possible.

The first London tube, the City & South London, opened in 1890, adopted mechanical signals of similar general construction but fitted with electric lamps and lamp type repeaters, as mentioned in an editorial note in our issue of November 25 last, page 893. It may seem strange that purely electric signals were not used, as it would have been so simple to switch lamps on and off instead of using the rather cumbersome mechanical apparatus actually employed, but there was no doubt some natural reluctance to depart from well-established practice in such a serious matter as signalling. Such signals, automatically controlled, are known to have been used, however, on the Budapest underground electric line, opened in 1896, and were apparently formed of boxes containing glow lamps behind coloured glasses but without lenses. The Central London line, opened in 1900, adopted the same system of signalling as the City & South London in every respect, but the Waterloo & City tube, opened in 1898, had electrically-worked light signals midway between the termini, having internal movable spectacle mechanisms and lenses, foreshadowing the so-called "searchlight" type of more recent years. These signals were designed by W. R. Sykes, who is known to have offered to the Central London Railway, while the line was under construction, a system of automatic signalling including lens type signals having no moving parts; but it was not until the Great Northern & City tube was opened in 1904 that a complete installation comprising such signals was seen in this country. This line had an insulated traction return and d.c. track circuits, the signal line relay armatures having locks holding them when dropped until freed by a brush contact treadle circuit, as a precaution against irregular track circuit action. This installation remained in use until very recent years, but was not copied by any other railway. All the signals above spoken of were, of course, for sub-surface railways.

Simple forms of signal composed of electric lamps without lenses were to be seen here and there on single-line tramways about the end of last century, and a very interesting automatic block system using them, described in our issue of October 18, 1935, page 625, was adopted for Langen's suspended monorail line between Barmen and Elberfeld, opened partly in 1901. Approach lighting was used in this installation, believed to be the earliest instance of it, and of electric lights as signals on an open-air railway in the day-time. The earliest attempts to make a light signal for outdoor use having a range of visibility comparing with older kinds of signal appear to have been made on the American inter-urban lines. Certainly by the year 1911 some complete installations were in service thereon and had been pronounced satisfactory by responsible authorities. It then became evident that a signalling system using one system of aspects, day and night, bade fair to become a possibility on the main lines if the design of lamps, lenses, coloured glasses, and other details could be sufficiently perfected. In due course this thought was brought to fruition.

That the idea was not realised without considerable scientific research was made evident by Mr. J. E. Candler's interesting paper "Optical Systems for Light Signals," read before the Institution of Railway Signal Engineers on January 25. Many more problems had to be solved than might appear at first sight, as the paper clearly showed, before all the requirements of a really

efficient signal were met, but now the semaphore has been superseded on a large mileage of line in many countries. The simplicity of the light signal, the ease with which it can be controlled, the small space taken up, the constant system of aspects day and night, the heightened visibility in bad weather, all these are such great advantages that its rapid advance in favour is readily understood. Nevertheless it is unlikely that it will supplant the semaphore altogether. There are conditions under which the latter is preferred, provided it is efficiently lighted at night, as on certain American lines abounding in curves through hilly, wooded country and where the ability to see the signal indications when in advance of them is useful to men using motor trolleys, or working on the line. We referred to such a case in an editorial note in our issue of May 7, 1937. An additional reason for the success of the light signal has been, no doubt, that our semaphores are relatively poorly lighted—we must not be supposed to be casting aspersions on the lamp designers in saying this—and it is not practicable with our two-position signal system to put much stronger lights in them, for fear that a bright green light might be taken as a "clear" multiple-aspect indication. In other words, the meaning of the green lights on some lines at present actually varies with their brightness, a situation the origin of which is easily explained but is not theoretically justifiable. It is for this reason that some have advocated further means of distinguishing multiple-aspect signals, enabling semaphores to be given stronger lights or to be replaced by colour-light units where convenient, without any possibility of confusion arising. With our armless mechanical colour-light signals, of course, this difficulty does not arise, as they are arranged to produce multiple-aspect indications.

\* \* \* \*

### Post Office (London) Railway

THE 6½-mile tube railway maintained by the Post Office between the Eastern district office (Whitechapel) and Paddington station today conveys about 6,500,000 letter bags and over 4,000,000 parcel bags per annum. During the quiet periods of the year the weekly car-mileage averages about 34,000, but this is increased to 38,000 in the busy autumn season, and with the peak conditions of the Christmas pressure period as many as 68,000 car-miles have had to be run in a week to meet the service demands. These figures were among the many interesting statistics given by Major W. G. Carter of the General Post Office in a paper which he read recently to the Institution of Engineers and Shipbuilders in Scotland. The Post Office (London) Railway was brought into being on the recommendation of a Departmental Committee set up in 1909, and the tunnelling work was begun in 1914. The outbreak of war deferred further progress, and contracts for the equipment were not placed until 1924. The line was opened for traffic in December, 1927, and was then fully described and illustrated in *THE RAILWAY GAZETTE* of February 10, 1928. This railway, which is worked automatically and entirely without train staff, consists of an iron-lined tube of 9 ft. internal diameter built about 70 ft. below the street level. There are six intermediate stations in its length of 6½ miles; the greatest distance between any two is 1 mile 293 yd., and the least, 380 yd. Every station is raised above the general level of the main-line track so that arriving trains are retarded and departing trains accelerated by the gradient. Trains are worked to a regular timetable, and the line is open continuously on all week-days excepting between 7 a.m. and 9 a.m. This two-hour period and the whole of Sunday provide the opportunity for repairs and renewals.

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

### Railway Directors

February 25

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I was very pleased to read about the criticism of the board at the L.M.S.R. meeting. I think the proposal that directors should resign at 70 without further payment is an excellent one. I also think it ought to be compulsory for every director to travel 5,000 miles third class every year.

RAILWAYAC

[Our correspondent's suggestion is quite Victorian in tone, but expressed in slightly more humane form. It calls to mind the famous letter which Queen Victoria wrote to Mr. Gladstone on October 3, 1873. Her Majesty was greatly concerned about railway accidents and said: "The Queen must again bring most seriously & earnestly before Mr. Gladstone & the Cabinet the very alarming & serious state of the railways . . . if a Director was bound to go with the Trains we shld soon see a different state of things!"—ED. R.G.]

### The Square Deal Campaign

BM/HLMX, London, W.C.1

February 11

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Since I have travelled about 9,000 miles in the last 5 months, there have been far too many instances of lack of heating, inadequate cleaning, and poor ventilation for me to attempt to chronicle or for you, I imagine, to find space to print.

However, Sir William V. Wood can find answers to his statement on heating and other matters in two rightly indignant letters in *The Times* of January 7 and 9, to which he replied and expressed himself as "disturbed" (!) by such extraordinary revelations; also by the fact that "Peterborough" in *The Daily Telegraph & Morning Post* recently related that the Southern Railway's electric special train from Waterloo to Reading containing the Deputy Chairman of that company and its guests, the gentlemen of the Press, was without either heat or hot water. And one gathers that the Press were not very pleased about it either!

Sir William states that his company has a Customer Research department. Would he like to take us into his confidence and tell us how many people were scientifically "contacted" during 1938? Probably some of your readers would be interested to have some detailed information on these activities.

Sir William also says that it is idle to compare General Motors Corporation with British railways. Instead of remarking, "with that I totally disagree," I will merely submit the view that so long as two concerns, or even two entirely different industries, have something to sell, there is inevitably a basis for certain comparisons. For instance, one can contrast their public relations departments, their general attitude towards the public and critics like myself! Write to a railway company about its shortcomings and you know in advance that you will get a defensive letter either informing you that you are wrong or that the circumstances were exceptional. But write to General Motors, for example, about some product of theirs which you think is not right and their answer indicates that an entirely different business philosophy pervades, motivates, energises, and governs their colossal activities. And I know of at least one railway company in the world of which the same thing can be said.

The fact that General Motors' Customer Research Department contacts 3,000,000 people annually and manages to get answers to its questions from about 2,000,000 people each year (see *Time*, November 14, 1938, page 68) in order that

its products and methods shall accord as closely as possible with public wants and desires is, I submit, something that even British railways should ponder and study. After all, the present difficulties of the railways have been very largely brought about by the activities of the automobile industry.

Yours truly,

J. L. M. BARCLAY

P.S.—Enclose a General Motors' booklet which may be of some interest.

[Our correspondent's references to the heating of the Southern Railway electric trains shows the harm that may be done by an inaccurate newspaper report. It has been proved that the criticism by "Peterborough" in *The Daily Telegraph* was quite unjustified, but the Editor had not the courtesy to publish a correction. By way of bringing a little lightness into his speech Mr. Missenden, the Traffic Manager, mentioned that owing to the frost the water heating plant in one of the lavatories had broken down. Somehow this has been interpreted to assume that the compartment heating was not on in the train, which was quite inaccurate as all the windows were steamed, on the way down, and the guests had to wipe them before they could see out; the only criticism of the heating was that it was rather too strong.

Mr. Barclay's remarks on the success with which the General Motors Corporation has conducted its business might well have ended by suggesting that the railway companies should have the same freedom as General Motors in regard to their commercial activities. The General Motors publicity booklets do not refer to a "square deal" but they have a "set square" on the outside cover!—ED. R.G.]

### The Evolution of the Distant Signal

137, Icknield Way, Letchworth,

February 28

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—With reference to page 995 of the issue of *THE RAILWAY GAZETTE* dated December 9, 1938, you may be interested in the following two regulations of the North London Railway relating to distant signals:—

*Regulation dated 1874.*—Where distant signals are provided, drivers must stop at the distant signal when at danger, whistle, and then proceed to the home signal.

*Regulation dated 1876.*—Distant signals are not "repeaters." When turned off or placed at caution, they only convey permission to proceed to the home signal. The home is locked with the starting signal and cannot be lowered until the latter has been lowered. Drivers are verbally instructed (or by hand signal) when required to pass the home signal at danger.

The present system of locking the distant with the home and starting signal, and leaving the home free, appears to have been adopted on the North London Railway about 1880.

Yours faithfully,

H. V. BORLEY

**B.S.S. FOR CAST IRON STRAIGHTEDGES.**—The British Standards Institution has recently issued the second of its Specifications in the series of Standards for Engineers' Precision Tools, namely, B.S. No. 818, for cast iron straightedges of bow-shaped design. As in the case of the British Standard for surface plates recently issued, the primary object of this specification is to prescribe standards of accuracy, and very little limitation is imposed on design other than requirements as to the minimum overall depths and the widths of the working face for various lengths of straightedges up to 8 ft. Copies of B.S. No. 818, price 2s. net, 2s. 2d. post free, may be obtained from the British Standards Institution, 28, Victoria Street, London, S.W.1.



## PUBLICATIONS RECEIVED

**The Wheel.** By Vernon Sommerfield. London: Nicholson & Watson Limited, 7, Paternoster Row, E.C.4. 8½ in. × 5½ in. × 1 in. 248 pp. Illustrated. Price 12s. 6d. net.—This volume would be easier to review if some prefatory guidance were given as to whether it has been prepared as a popular exposition or a serious treatise—the matter favours the former view, but the treatment at times suggests the desire of the author to be taken as a serious contributor to transport history.

If treated as a popular story, Mr. Sommerfield's volume has the merit of giving a generally accurate and readable broad outline of land transport dependent upon the wheel from the earliest days of recorded history up to the present time. He shows himself familiar with the results of modern research, and avoids many of the common and much-repeated errors. Incidentally, he exhibits a flattering knowledge of the contents of THE RAILWAY GAZETTE, which he copies extensively but not always accurately. This tendency to carelessness is further exemplified by the consistent misrendering of Prior Park, Bath, as *Priory* Park, and by the fact that in the text (page 147) the date of the first Birkenhead tramway is given as 1860, but in the chronology (page 232) as 1858. Moreover, on questions of fact Mr. Sommerfield is not an infallible guide, and the railway enthusiast who is told on page 187 that the original "pill-box station entrance of the Tower Subway close by the Tower of London, still exists," will be disappointed if he tries to find it, for the present structure was erected less than 13 years ago. A similar disappointment awaits the visitor who tries to see an L.N.E.R. train crossing the Causey Arch of 1727 in County Durham (*vide* page 26). Nevertheless, meticulous accuracy is not a characteristic of the popular story, and, judged on the standard of such books, Mr. Sommerfield's volume is entitled to rank high.

If, however, we are correct in suspecting that the author wishes his work to be regarded as a serious treatise—an assumption supported by his inclusion of a dissertation on the evidential value of historic references—we feel that Mr. Sommerfield should have given his readers the benefit of at least a little original research. Without exception, the sources upon which he relies for his early railway references are those quoted in a series of articles in our own columns during 1937, and he accepts verbatim the translation from foreign works there given. This failure to quote new sources of reference is all the more remarkable when he bases an argument on such unsupported remarks as (page 36) "we have references in plenty to the colliery plateways" and (page 37) "we know that flanged rails were . . . used on the Tanfield Causeway and the *Priory* Park line." Regarding the latter remark, we know

from contemporary documentary evidence that it was not so. A specimen of the lucidity of the author's argument is as follows: quoting Daubenton as writing in 1782 that "All these tracks are composed of pieces of timber . . . these (waggon) wheels are designed in such a fashion that the waggon cannot turn aside and is obliged to follow the path provided for it," Mr. Sommerfield comments that this description "might apply to a flanged wheel . . . and it might, for that matter, refer to a flanged rail." On the strength of such reasoning, he decides that "all the available evidence points to the flange having been applied to the rail before it was fitted to the wheel."

### The Engineers' Who's Who, 1939.

A Register of Engineering Appointments and Attainments, Compiled and Edited by M. E. Day. Dorking, Surrey: The Engineers' Who's Who, Glenwood. 8½ in. × 5½ in. × 1½ in. 734 pp. Price 20s. net.—This volume is described as the second edition of "The Engineers' Who's Who," and the foreword states that it contains the names of nearly 7,000 British engineers who, for the most part, are actively engaged in work in the United Kingdom. We have not seen the first edition, but as we are informed that the present volume contains more than five times the number of biographies given in the previous volume, presumably the first edition was by way of being an experimental production. Apparently the basis of compilation has been that of circularising the members of the leading engineering institutions, and as acknowledgments are tendered to the various professional institutions for their co-operation and advice, presumably they supplied the compiler with lists of their members. The volume includes in alphabetical order names, professional qualifications, and brief details of their careers not only of civil, mechanical, and electrical engineers, but also a selection from such specialised branches of engineering as aeronautical, automobile, gas, locomotive, and water; in addition, the metal and allied industries are covered. Both binding and printing are simple and well suited to a reference work, although it is difficult to understand why a change in type face is made arbitrarily at page 548 and continued to the end of the volume. By reason of our own experience in the production of annual reference works, we are well aware of the difficulties resulting from the failure of questionnaires to receive anything approaching a 100 per cent. response. Hence, although the railway engineering industry is adequately represented quantitatively, there are some notable omissions, such as Messrs. W. A. Stanier and W. K. Wallace, respectively Chief Mechanical Engineer and Chief Engineer of the L.M.S.R., and Mr. O. Bulleid, Chief Mechanical Engineer of the Southern Railway. It is possible that

similar omissions apply to other industries with which we are not so intimately associated, and accordingly we would suggest that in future editions such outstanding personalities in their particular spheres should be mentioned by name and title even if it proves impossible to add biographical particulars gleaned officially. There is no other recent work to our knowledge covering quite the same ground as "The Engineers' Who's Who," and accordingly reference shelves which need this type of information will find the present book a valued addition.

**Holiday Guides.**—"Easter Holidays," a programme just issued by Thos. Cook & Son Ltd., makes clear the reason why ever-increasing numbers of people decide to spend Easter away from home. The keynote of the programme is "value for money," and that this is no idle boast may be judged from the fact that a four-day Easter holiday in Ostend costs only £3 3s. 6d. Another programme, "Open-Air Holidays Abroad" will attract younger people and those who wish to "discover" a foreign country by walking, cycling, or canoeing. Although the holidays listed are all remarkably cheap, there is no question of "roughing it," for at the end of the day's walk or run, a comfortable hotel awaits the traveller.

**A Testing Machine for Many Purposes.**—We have received from British Timken Limited, of Aston, Birmingham, a booklet describing the firm's new wear and lubricant testing machine. Designed for a variety of uses, this machine provides a simple, yet accurate, means of obtaining information on the load-carrying capacity of lubricants and the wear characteristic of materials. By its agency, manufacturers may test the strength of their product under friction loads and make comparisons with the products of their competitors. A sectional diagram of the machine, and instructions on how to conduct the tests, are included in the booklet.

**Cables in Industry.**—Callenders' Cable & Construction Co. Ltd. has issued a booklet illustrating applications of the company's cables in industry, transport, and for the wiring of domestic, administrative, and other buildings. A topical example is the use of approximately one mile of Callender cable in each air liner of the "Ensign" class lately placed in service by Imperial Airways; cables of this make are also used for all the ring mains in the R.M.S. *Queen Mary*, and are installed in all vessels of the Southern Railway cross-Channel and ferry fleet. The new signalling installation at Howrah (Calcutta) takes over 50 miles of Callender cables of various types. Electrical distribution for lighting and heating is represented in the booklet by illustrations of the Dumfriesshire scheme, which brings current at low rates to over 1,000 square miles of rural country. All overhead distribution work and supply of cables was undertaken by Callenders Cable & Construction Co. Ltd.

## THE SCRAP HEAP

Various letters from the public received by the Railway Companies' Association during the "square deal" campaign are exhibited in the "Fighting for Freedom" exhibition now in progress at Waterloo station (see pp. 337 and 390). One of them is addressed to "Lord Stamp, London," and opens with what is apparently the pious invocation "Dear Lord."

\* \* \*

An interesting commentary on Lord Stamp's assertion at the L.M.S.R. general meeting that directors over 70 are as good as those under that age, is Sir George Trevelyan's reminder in his book "Charles James Fox" that 150 years ago a man of 60 who retained his full vigour was either the wonder of his time or the object of contempt on account of his miserable temperance.—From "The Manchester Guardian."

\* \* \*

"HORSEY, KEEP YOUR SALE UP!"

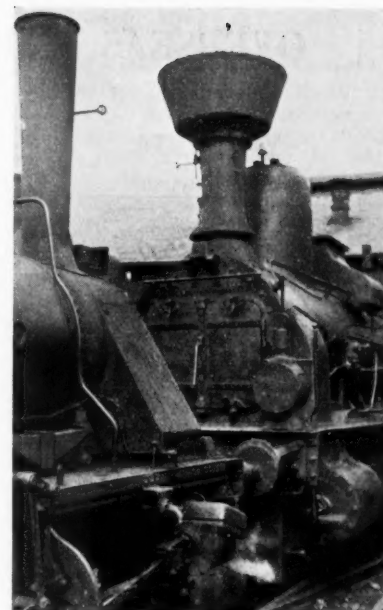
We have received the following account of the "Waterloo Cup" Race (12 times round over the rails) from one of the stewards of the course:—

The race meeting started on January 1, 1938, every station on the Southern Railway having an equal chance and being represented at the starting-gate by the five divisional runners; Waterloo station's money was on a piebald filly named *London West*, which started at 10 to 1 against.

*London West* was trained by Jack Sharpe, her colours were green and gold, and she was ridden by none other than Jack Sharpe himself. At the trials *London West* put up a good show; she was paced by Reg. Levien, the time-keeper was Fred Evans, the plating, saddles, &c., were looked after by Fred Rees, while poor old Bill Bartlett had to scrounge the fodder. At first Jack Friend "groused" a bit about her timing, but she improved greatly and came up to the starting-post the picture of good health.

Mr. E. J. Missenden was the starter, W. J. Shorter in charge of the "tote," and Percy England the Clerk of the Course. At 12.05 a.m. on January 1, 1938, they were "off," Jack Sharpe getting away in fine style and *London West* answering superbly to her jockey; she took the first jump one length in front of *London East* and at the fourth fence was leading by three lengths and going well. Her jockey maintained his lead past the half-way house, but began to slacken a bit at the Crisis water-jump; nevertheless, at the October fence *London West* was still leading by 1½ lengths. It was then that Jack Sharpe began lashing it into his mount, and she finished on December 31, in a blinding snowstorm, with a comfortable lead of 1½ lengths.

The owner, Colonel Szlumper, led her into the paddock, and *London West*, after weighing in, was officially declared the winner of the First



Are they negotiating an "Anschluss"? An unusual juxtaposition of old-time chimney fashions seen recently at Vienna South sheds, German State Railway

Southern Sales League Passenger Cup. It was a grand race, and Jack Sharpe is to be complimented on the famous way he rode his filly to victory.

## One Hundred Years Ago

Extracts from the March, 1839, issue of "The Railway Magazine" (afterwards "Herapath's Railway Journal") and the oldest constituent of

THE RAILWAY GAZETTE

**Liverpool & Manchester Railway: Fourteenth Half-Yearly Meeting.**—The directors are happy to meet the proprietors with a statement of increased traffic in each branch of the concern, as compared with the corresponding period of last year. In the merchandise department, the revival of the foreign trade of the country, which was so much depressed in 1837, has contributed materially to this favourable result. Between Liverpool and Birmingham also, the goods traffic has increased; and a considerable augmentation of traffic along the line from Liverpool to the Bolton & Leigh Railway, has further added to the receipts in this branch of the company's business. Since the meeting of proprietors in July last, the North Union Railway from Preston, through Wigan to Liverpool and Manchester, has been opened to the public. The conveyance of passengers by this line, commenced on October 31 last. The arrangements for the transport of goods are not yet completed; and no correct estimate of the traffic in the coaching department can be formed from the brief experience of two

months, in the most unfavourable season of the year.

**North Union Railway: Speed.**—A friend of ours, who has lately travelled by the mail train on this railway, from Parkside, its connection with the Liverpool & Manchester line, to Preston, 24 miles, says, they do it in 40 minutes the least, to 45 minutes the longest time, which is from 30 to 36 miles an hour, including a stoppage at Wigan. This is a fair railway speed.

**Great Western Railway.**—The seventh half-yearly general meeting was held at the company's offices, Princes Street, London, on February 12, 1839; W. U. Sims, Esq., in the chair. The directors have the satisfaction of reporting, that during the period from June 4 to December 31 last, 264,644 passengers have travelled upon the railway, being an average number of 1,278 per diem. Upon a calculation of the total number of miles travelled by all the passengers, it is found equal to a daily average of 1,037 persons going the

whole distance of line yet opened between London and Maidenhead. The short trains did not commence running until December 17, so that there had been scarcely any accession of income from that branch of traffic during the last half-year. The directors have every reason to hope that it will become an important addition to the company's receipts, and a great public convenience to the persons residing within a few miles of London.

**Grand Junction Railway.**—Several of the trains are now, to a certain extent, dependent upon others joining them from the London & Birmingham and North Union Railways. In cases of accidental detentions on these lines, from causes similar to those which at times affect the Grand Junction trains, and in the transfer of passengers and carriages, delays have taken place which may be expected to recur, although much has been done to render them less frequent. This is indeed a condition from which no travelling dependent on other conveyances can be exempt. During the winter the trains are also often delayed by the late arrival of mails from the turnpike roads, especially by the Bristol mails running to meet the three o'clock a.m. train from Birmingham, for which it has been necessary to wait almost daily.

## OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

### VICTORIA

#### Reduced Suburban Fares Bring More Traffic

It is satisfactory to note that the substantially reduced day-return fares for suburban travel [referred to in some detail in *THE RAILWAY GAZETTE* of January 27—Ed. R.G.] have resulted in considerably increased traffic. For the four Sundays, December 4, 11, 18, and 25, nearly 12,000 additional return journeys were made compared with the average normal Sunday travel prior to the introduction of the reduced fares on December 4. These fares are on trial for a period of three months, covering our summer season, and now that the Christmas—New Year period has ended, it is confidently expected that, with the return of holidaymakers to the city, coupled with appropriate weather conditions, there will be an even greater stimulation of traffic on Sundays.

#### Track Improvements in 1938

To cater for higher speeds and heavier trains, and provide additional comfort for passengers, an extensive programme of relaying and strengthening the track was carried out last year. Notable details in it were the completion of the Newport junction—Geelong relaying, wherein rails welded into 225-ft. lengths were normally used. In two instances, however, experimental continuous lengths of rail were 4,747 ft. and 4,321 ft. These and other modern refinements have made this one of the finest lengths of line in the Commonwealth.

### NEW SOUTH WALES

#### Coal Strike Affects Revenues Adversely

On September 10 the coal miners engaged throughout the Commonwealth ceased work. Efforts to settle the dispute were not successful until October 16, so that the dispute was far reaching. The annual production of coal in Australia amounts to approximately 12,000,000 tons, of which quantity 10,000,000 tons are mined in New South Wales. The effect of the strike on the railways of this State was, therefore, serious. Coal and coke tonnages dropped from 1,319,240 tons for the two months of September and October, 1937, to 428,722 tons for the same two months of 1938.

The long duration of the strike depleted stocks of coal considerably, and for some time before the end of the strike reduced train services were operating on the goods side. The department was obliged to refuse acceptance for transit of many commodities. In-

cluded in the banned list were timber, bricks, cement, tiles, fibrolite, plaster and plaster sheets, crude ores, gravel, lime, limestone, &c. In consequence goods revenue dropped sharply.

#### Increased Working Expenses

Added to the losses due to the strike, the administration, from the beginning of December, has had to face an increase of 2s. a week in the basic wages (both State and Federal). The estimated additional cost of these increases is assessed at approximately £117,000 for the remainder of the current financial year.

#### Prospects for Last Half of Year

Coaching traffic has remained buoyant, and revenues from sales of electricity and catering services have also been satisfactory. But, although the coal strike has terminated, the position with regard to goods and livestock traffic is still obscure, because of severe drought and bush fires which are affecting large areas of the State. The feeling of the administration at the moment is that the railway results will not be as satisfactory as they have been during the past two years, and consideration may need to be given to increasing freights and fares in an effort to balance the budget for the third successive year.

### SOUTH AFRICA

#### Tourist Development Corporation

The Tourist Development Corporation, referred to in *THE RAILWAY GAZETTE* of November 18, 1938, is now in a position to begin operations, the required guarantee of £12,500 from private contributors having been raised. To this amount the Treasury will add £12,500 and the railway administration £25,000. It is anticipated that practical operations will begin in March after the corporation has been established by proclamation. Provision has been made for its income to reach £100,000 eventually, and its function will be to boost the whole of Southern Africa which has been defined in the Act as "Africa South of the Equator," thus including Southern Rhodesia, Northern Rhodesia, and Mozambique, so that the Victoria Falls and the Zimbabwe ruins, for instance, can be included as part of the attractions offered to tourists.

#### Airways

In accordance with the policy of the South African Airways of establishing emergency landing grounds along all the routes operated, 23 such landing grounds have already been completed. They will eventually be established approximately 100 miles apart in open country, and 50 miles apart in country

which renders forced landings dangerous. They will each be provided with two runways, and it is stipulated that the minimum dimensions of each must be 800 yd. by 200 yd. As another means of increasing the safety and regularity of flying, S.A. Airways have completed arrangements for the installation of the Lorenz blind landing system at Durban and Port Elizabeth.

Since the inauguration of the Empire air mail service on July 1, 1937, whereby all first class mail is now carried at 1½d. per ½ oz., there has been a considerable increase in the mail carried by the S.A. Airways. During 1937-38, air mail loaded for places within the Union amounted to 1,254,602 lb., an increase of more than 900 per cent. over the 119,924 lb. for the year 1936-37. For places outside the Union 355,729 lb. were loaded in 1937-38 against 105,617 lb. for the previous year.

### ARGENTINA

#### Further Air Travel Proposals

A comprehensive scheme for extending the internal air mail services of the country has been submitted to the Government by the Aereoposta Argentina Company. It is proposed to establish an aeroplane passenger service from Buenos Aires to the Bolivian frontier *via* Salta, and another to Asunción, Paraguay, *via* Resistencia, in addition to the extension to San Carlos de Bariloche, and eventually to Esquel, of the existing service from Bahía Blanca to San Antonio Oeste. The board of directors would include representatives of the Government, which would grant a subsidy for the operation of the different lines. In the case of the proposed line from San Antonio Oeste to Bariloche, the subvention is estimated at \$1.50 a km., representing a charge to the Government of \$84,240 per annum. The service on each of the projected routes would comprise two round trips a week with machines having a capacity for 16 to 18 passengers.

#### Tobacco and Cotton Production

Tobacco and cotton cultivation are rapidly developing into important Argentine industries, with resulting benefit to the railways serving the zones devoted to the production of these commodities. According to figures issued by the Ministry of Agriculture, the area occupied by tobacco plantations for the period 1938-39 is estimated at 18,050 hectares (45,125 acres), an increase of 6,459 hectares (16,147 acres) or 55 per cent. over 1937-38. The official estimate of the area planted with cotton puts this at 406,700 hectares (1,016,750 acres).

#### Increased Fruit Exports

A substantial increase in the volume of Argentine fresh fruit exports is indicated by the comparative figures issued by the Ministry of Agriculture,



the classified list, which embraces 16 varieties, including several kinds which have not hitherto figured, or only in small quantities. During the second fortnight of December, 1938, and the first fortnight of January this year, 2,229,579 boxes of fresh fruit, weighing 33,074,466 kg., were exported, as compared with 2,040,783 boxes (29,280,542 kg.) during the corresponding period of 1937-38, an increase of 3,793,924 kg., or 12.96 per cent. Of this total, pears accounted for 18,265,667 kg., grapes for 8,364,457 kg., and apples for 4,085,480 kg.

#### C.C.R. and Transandine Purchase Laws Promulgated

The final stages in the transfer of the Córdoba Central Railway to State ownership were consummated on January 9, when the Act was promulgated by Presidential Decree. On January 20, the Transandine Railway Purchase and Reconstruction Act was also promulgated by President Ortiz.

## INDIA

### Spring Bazar Special

The Hindusthan Railway Agency has been authorised by the East Indian and Eastern Bengal Railways to organise and run a Spring Bazar Special which will visit 12 stations on the E.B. and 18 stations on the E.I. Railway, halting for a day at each station. The special will leave Calcutta on March 3, 1939. Full particulars of the scheme are available from the organisers.

### Passengers Take the Law into Their Own Hands

As a result of the court judgment [referred to in our issue of February 10—Ed. R.G.] recently given in favour of a passenger who pulled the communication chain continuously in order to prevent a train leaving a station because it was said to contain insufficient passenger accommodation, there have been many other similar instances during January and February. The Bombay suburban train services of the G.I.P.R. were subjected to considerable dislocation on account of such direct action on the part of passengers who, in protest against the reduction of accommodation in suburban trains, prevented trains from proceeding by repeatedly pulling the alarm chain. On other occasions, similar dislocation extended to the main line, and popular leaders had to be called in to persuade the demonstrators to disperse, on the assurance that the administration would look into their grievances.

The G.I.P.R. Bombay—Delhi passenger train was held up for five hours at Jakhlon station on February 6 by reason of a number of men and women lying down in front of the engine to prevent the train from proceeding. It appears that the accommodation in the train was insufficient to

take in a large crowd that had gathered at the station on the occasion of a fair in the neighbourhood. It is alleged that passengers attempting to board two coaches reserved for British troops were rough-handled and evicted. After considerable persuasion by the police the crowd allowed the train to pass.

### Seasoning of Sleepers

The Forest Research Institute at Dehra Dun has long been co-operating with the Railway Board in matters relating to the use of timbers by the Railway Department. In association with the Turpentine & Rosin Company and the Sleeper Control Office of the northern group of railways, the institute has been carrying out investigations into the seasoning of railway sleepers. The seasoning of *chir* sleepers is being studied from the time they are cut until they are ready to be placed in the track, to ascertain with accuracy the amount and nature of seasoning defects at various stages. With this information, it is expected that the institute will be in a position to suggest improvements in seasoning, which will minimise the rejection of sleepers in the process of passing.

## SPAIN

### New Timetables

An announcement issued to the press and public on February 3 gives the new timings for the train service between Barcelona and the neighbouring towns of Sarrià and Tarrasa. It is significant that the circular bears the name of the company owning the railway, Ferrocarriles de Cataluña Sociedad Anónima. Service was also resumed on the Barcelona—Lérida line on February 3, temporary repairs having been effected on the damaged bridges.

### Railway Rehabilitation

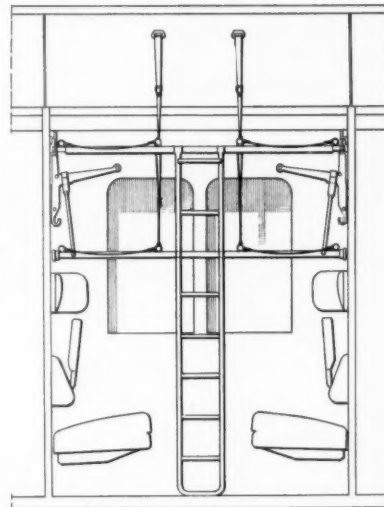
The condition of the rolling stock taken over by the Nationalists in Catalonia shows clearly the stress of wartime conditions. Railway workshops in many cases have been devoted to munitions work and there are serious arrears of maintenance to be overtaken. Track maintenance is perhaps less in arrear than rolling stock repairs, but many bridges have been damaged or destroyed. It is probable now that the rehabilitation requirements of the railways will be considerably greater than was envisaged in the Decrees of the Nationalist Government (1) dated in Burgos, March 12, 1938 (see THE RAILWAY GAZETTE of May, 13, 1938, page 922) authorising provision for rolling stock and permanent way replacements, and (2) of June 15, 1934, summarised in THE RAILWAY GAZETTE of June 10, 1934.

In the likely event of the national manufacturers being unable to meet all demands, protection will probably be relaxed and orders given abroad.

## ITALY

### Third Class Hammock Sleepers

In accordance with the wish of the Government that sleeping accommodation should be made available to the general body of the public, the State Railways have designed the arrangement for cheap and convenient third class sleepers seen in the accompanying sketch, taken from *Trasporti e Lavori Pubblici*, for use with the all-steel coaches now running. Hooks are fitted in the compartments in such a way as to allow hammocks to be swung on straps at night and stowed away by



day, making room for 6 persons to sleep. The seating space is, however, for 8. For the present this equipment is being provided only in certain excursion and cheap fare trains, such as winter sports specials, where it is expected that the reclining facilities will be much appreciated; only a very small supplementary charge is being made.

## UNITED STATES

### The Popularity of the Roomette

So popular has the roomette type of sleeping car proved since its introduction on the Pennsylvania Railroad, that the use of this new type of individual private-room Pullman accommodation on "blue ribbon" through trains is to be materially extended. On Monday, February 6, roomette car service was inaugurated between New York, Philadelphia, and Cincinnati on the Cincinnati Limited, the fast overnight train in both directions. From that date also, roomettes became available on The American, in both directions between New York, Philadelphia, and St. Louis. Moreover, the Spirit of St. Louis, the fastest train to and from St. Louis, which already provides roomette service, has been equipped with additional cars on both the west and eastbound trains. [The roomette was described in our issue of August 27, 1937.—Ed R.G.]

## PROJECTED ST. ALBANS RAILWAY OF 1817

*A scheme for a public railway to feed the Grand Junction Canal, which was to be built with second-hand plate-rails, probably from the Northampton line*

IN the last decade of the eighteenth century and the first quarter of the nineteenth century railways were fairly generally regarded either as adjuncts to canals or as an alternative to them when contours of the land were against inland navigation. Thus when the Grand Junction Canal was in course of formation it made various uses of railways or tramroads both as temporary links in the through chain of communication and also for feeding the main line. The Grand Junction Canal was promoted in 1792 and incorporated by an Act of April 30, 1793. The main line extended from Braunston (Northamptonshire) to the Thames at Brentford, and various branches were planned, including one from Gayton to Northampton. The canal was opened from Brentford to Uxbridge on November 3, 1794; from its junction with the Oxford Canal at Braunston to the embankment at Weedon Beck in July, 1796; in June, 1797, extended to the embankment at Bugbrook; and, in November, 1797, further extended to the north end of the tunnel at Blisworth. Communication between Two Waters and the Thames was effected in June, 1798; in 1799 the main canal was completed as far as Bulbourne (near Tring), together with the Wendover branch; in June, 1800, was extended to Fenny Stratford; and in October, 1800, reached the south end of Blisworth tunnel. Not until March 25, 1805, was the tunnel finished, and during the intervening years "a temporary railroad three miles and upwards in length, over Blisworth Hill" (opened in October, 1800) linked the north and south sections of the canal.

The opening of the Blisworth tunnel on the date mentioned completed the main line of the canal from Brentford to Braunston, and the first boat to pass through the tunnel was the *Marquis of Buckingham*, one of the Paddington packet boats. The canal was improved during the same year when on August 26, 1805, Wolverton aqueduct over the River Ouse was opened superseding eight locks, namely, four down to and four up from the river on each side. Meanwhile the branch canal to Northampton had not been built, and as the plate rails which had been used to form the link between the north and south sections of the main canal during the construction of Blisworth tunnel were now available, it was decided to build a temporary railway from the canal to Northampton using the same metals. Priestley's "Historical Account" of 1831 says that "the communication with Northampton and the River Nen is by a double railway, allowing carriages, going different ways, to pass without interruption." Nine years later (in 1840) "The Penny Cyclopædia" stated that "there is also a double railroad to Northampton." These sources of information seem to have been out of date, however, for the Northampton branch canal was opened on May 1, 1815, when presumably the plate rails once again became available.

A report of Thomas Telford dated May, 1805, refers to the railway about 5 miles long "from the east side of the canal, at a point about three-quarters of a mile to the north of Blisworth . . . to the Riven Nen, at the town of Northampton" as in course of construction and expected to be completed in a few months. It added that "the iron work is supplied by taking up the Blisworth Rail Road." The Grand Junction Canal records indicate the date of opening to public traffic as September 30, 1805. The working life of the Northampton plate railway was thus slightly under ten years.

These preliminary facts are of interest because recently we were accorded the privilege of inspecting a rare pamphlet in the Gladstone Library in the National Liberal Club which came to light when that collection was being indexed.\* The pamphlet in question bears the title "Observations on the Proposed Rail-Way from the Grand Junction Canal, at Bel-Swaine's, to the Town of St. Alban's," and is dated February 3, 1817. It appears that although an Act of June 2, 1795, had authorised a branch canal to the town of St. Alban, during the intervening period of more than 21 years no steps had been taken towards its construction. To meet local needs, the Grand Junction Canal Company then proposed that local interests should form a short railway and the first meeting for this purpose was held on January 24, 1817. A second meeting of the inhabitants of St. Alban's was called for February 4 of the same year, and the pamphlet in question (which bears no indication of its origin beyond the statement on the title page that it is "By an Inhabitant") was produced to set forth the arguments in favour of the scheme.

It stated: "A plan is now proposed by means of a Rail-Way commencing from the Grand Junction Canal at Bel-Swaine's which if carried into effect will very considerably reduce the price of carriage to this town; it is estimated that it will require a capital of £16,000 to complete it, the Grand Junction Canal Company offer to present Iron Plates they have now in their possession worth £5,000 thereby reducing the capital required to £11,000 and which is to be raised in shares of £100 each: The Grand Junction Company will give the Iron Plates on condition that the price of carriage, is not to exceed 1s. 6d. per ton: The chief object therefore for consideration is whether a sufficient number of tons of Coals, or other articles will pass along the Rail-Way to pay the interest upon the capital required and the expenses of the repairs of the Iron Plates, &c. . . ." The pamphlet proceeded to show that even existing traffic would suffice, and that improved facilities should both increase the volume of St. Alban's traffic and also make that town a railhead for distribution of goods to such points as Luton, Harpenden, and Redbourn. Despite this skilled advocacy, the railway was not built, and the aspirations of its promoters now live only in this scarce pamphlet.

According to the records of the Grand Junction Canal (now part of the Grand Union Canal) the matter of the St. Alban's railway was first considered by the canal company in October, 1816, when it was decided that, in view of the then state of the company's finances, the proposed railway should be conducted by a separate company and should be available to the public. The offer of the second-hand rails (almost certainly from Northampton) was made subject to rates which the canal committee approved on November 14, 1816; these were 1s. 6d. a ton for cartage and 6d. a ton for wharfage and weighing. The last reference to the line seems to be in January, 1818, when Thomas Telford was requested to permit a Mr. Provis—presumably one of his assistants—to survey the line. It may well be that it was the result of this survey which finally turned the scales against the project.

\* The published catalogue entitled "Early Railway Pamphlets, 1825-1900," was reviewed at page 857 of our November 18, 1938, issue

## TRAIN-LIGHTING GENERATOR TRANSMISSION

*Some details of the Brown Boveri geared drive used on the Swiss Federal Railways*

WE are indebted to Brown Boveri & Co., of Baden, Switzerland, for particulars and photographs, reproduced herewith, of a geared mechanism evolved by the company for driving train-lighting generators on passenger coaches of the Swiss Federal Railways. The system involves a geared drive mounted on an axlebox transmitting the torque to the dynamo through a jointed shaft.

Fig. 1 shows a train-lighting dynamo and drive, for an output of about 1,500 W. one-hour rating, on one of the light steel coaches of the Swiss Federal Railways. The gearbox is mounted in place of the ordinary cover of the axle bearing. The axlebox is provided with only one spherical roller bearing and can move in relation to the axle. The torque is, therefore, taken up through an ordinary claw coupling in the middle plane of the spherical roller bearing so that perfect meshing of the gear teeth is assured under all conditions. The step-up ratio is 1:3.125. Lubrication of the gears is quite separate from that of the axle bearing, oil being used for the purpose. The pinion shaft, running in a roller- and a ball-bearing, carries the coupling flange with which the jointed shaft is linked. The latter has cardan joints with needle roller-bearings which call for little lubrication. A spline takes up the variations in shaft length caused by the up-and-down movement allowed by the springs of the bogie frame. The generator is of standard design with suspension arms, and could be used for belt drive. The drive is so reliable that from it is derived the automatic regulation of brake pressure according to speed. The whole drive is built on to the finished coach.

The light steel coaches provided with this simple and very accessible generator drive each weigh about 26 tons and are about 23 m. (75 ft. 5½ in.) long over buffers; they seat 80 third class passengers. Under these conditions it is understandable that the weight of the train-lighting generator drive had to be kept as low as possible,

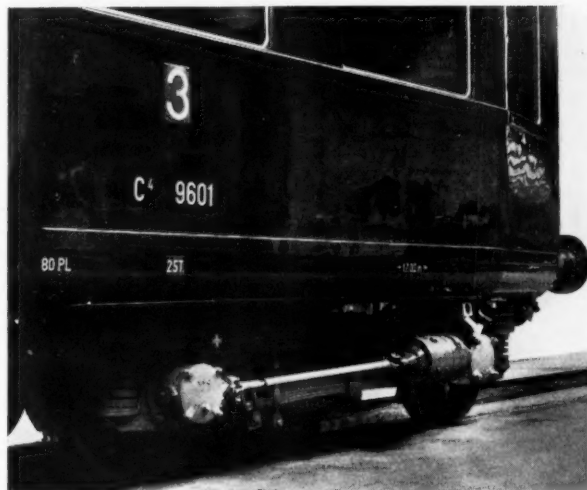


Fig. 1—Train lighting dynamo and drive gearbox mounted on end of axle bearing

a result which was attained by using light metal. The whole drive, with jointed shaft, weighs only about 35 kg. (77 lb.), and the generator itself about 80 kg. (176 lb.)

In the last service year, each of these light steel coaches travelled about 200,000 km. (125,000 miles) without any upkeep work on the generator drives. The highest speed regularly attained was 110 km.p.h. (68½ m.p.h.). Lately, the daily run of each car has been raised to as much as 900 km. (559 miles) with one annual overhaul. This is a striking example of the demands made today on modern rolling stock and the component parts.

In some types of bogie, certain protruding parts, such as the bolster springs, may render the placing of the dynamo and its drive rather more difficult. In such cases the cardan shaft is carried over the bolster springs through the agency of a double gear ratio (1:5). The 2.7-kW. generator is provided with feet to allow of securing it to the side beam of the bogie. When even this solution cannot be applied, it is generally possible to secure the generator to the end beam, crosswise to the track, as in Fig. 2. Here there are two separate gears—one on the axlebox, the other forming the bearing shield of the generator on the driving side.

Up to the present, Brown Boveri has delivered or has in hand about 110 cardan drives for four-axle coaches of the Swiss Federal Railways, and drives of the same kind are running on the Norwegian State Railways and are on order for the German State Railway.

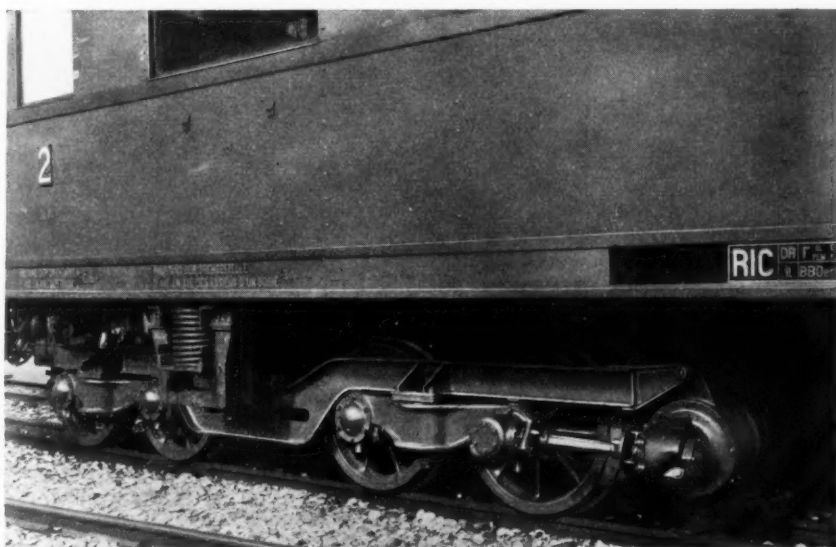


Fig. 2—Drive having generator mounted on transverse end beam



## REICHSBAHN ENGINEERING WORKS IN 1938

*Increasing traffic, the incorporation of Austria and the Sudetenland, and rebuilding of cities, kept the Engineering Department busy*

THE Engineering Department of the German State Railway was kept fully engaged throughout 1938 on a number of important works of various kinds. The replanning of Berlin and Munich involves large alterations in the railway approaches, including in the former case the abolition of the present several scattered termini and their replacement by two large stations, North and South. Work has been begun on the provision of the essential facilities to enable the main plan of the scheme, to deal with which special departments have been set up, to be put in hand in both cities. The new North-South underground line in Berlin was extended from Unter den Linden to Potsdamer Platz, where construction of the large underground station is making good progress, as is also that at the present Anhalt station. The important and difficult reconstruction works at the Zoological Gardens, where the local trains are now able to use their new platforms, and Friedrichstrasse stations have also advanced considerably.

The construction of four tracks on the densely trafficked section between Cologne and Dortmund, through Düsseldorf and Duisburg, had already been begun in sections, as local conditions necessitated; some were completed last year and brought into service. Work is now going on between Mülheim and Essen, and Bochum and Preussen. Numerous station alterations were also made and a new marshalling yard provided at Dortmund. As the layouts round Nuremberg proved insufficient to deal with the large traffic occasioned by party rallies, additional sidings have been laid down, not only there, but at key points on the approach lines, as at Würzburg, as well as additional signalling and other equipment. The Duzendteich and Märzfeld stations have been altered.

### For the Four-Year Plan

New lines have been laid to bring materials to the Hermann Göring works at Salzgitter, and alterations made to the station; Fallersleben station has been enlarged to meet the needs of the new People's Car Works. Herr Hitler's frequent presence at Berchtesgaden, and the visits there of diplomatic representatives and other guests, have made it necessary to enlarge the accommodation at the station. The Müglitz valley narrow gauge line was rebuilt to normal gauge and its alignment improved, so as to afford quick through communication from Dresden to the heights of the Erz mountains. New Rhine bridges were opened at Speyer and Maxau, replacing bridges of boats, and several sections of line were completed in East Prussia to improve cross-country communication. The doubling of a number of single-line sections was completed or well advanced. Electrification of the Nuremberg—Halle—Leipzig lines called for many changes in station layouts.

The principal alterations at stations, other than in Berlin and Munich, made with the object of facilitating traffic working, were effected at Hof, Plauen, Bitterfeld, Dortmund, Duisburg, Chemnitz, Wittenberg, Marienburg, Giessen, Remagen, and Zwickau. Several marshalling yards have also been re-arranged, notably at Seddin—one of the first mechanised yards in the country—Königsberg, Gremberg, and Frankfurt (Main). Extensive works were undertaken in Austria to improve the Linz—Passau line, and a new marshalling yard was begun at Wels.

Some time must elapse before the Austrian lines can be operated under the same rules and standards as those in the older territory. In Sudetenland the equipment on the ceded lines had been much damaged in places and needed extensive repairs.

About 400 level crossings were replaced by bridges during 1938; 110 were equipped with automatic warning light signals. It is hoped that all crossings will have either barriers or light signals by 1940. About 1,000 km. (621 miles) of track and 600 pairs of points were relaid, but there was some shortage of materials due to the demands of the four-year plan, and the expenditure of steel and wood is being carefully controlled. More use is being made of welding for repairs. Experiments with concrete sleepers are being pursued. A new design of 1 in 18½ double slip with a radius of 500 m. (1,640 ft. 5 in.) was adopted for the high-speed routes. The two permanent way measuring and testing coaches ran 40,036 km. (24,877 miles) in the year over Reichsbahn lines (including 1,364 km. (848 miles) in Austria and Sudetenland), and more than 6,000 km. (3,728 miles) over foreign lines, presumably for experimental purposes. A large amount of bridge strengthening was done, and 70 new bridges were constructed on the Müglitz valley line. Here again particular care was given to effecting a saving in the materials used.

### Roman Rutway in Syracuse



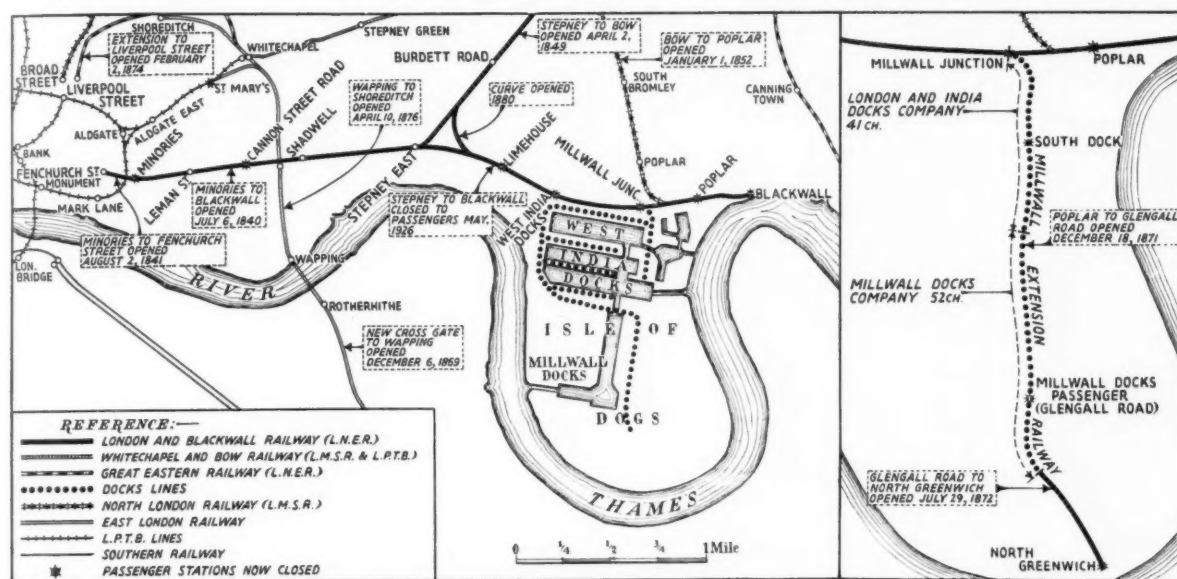
*An early form of the fixed track idea, and thus a predecessor of the modern railway, is to be found in the rutway form of road construction which seems to have originated in ancient Greece and to have extended to many parts of Italy during the Roman Empire. Our illustration, which is reproduced from "La Nature," of August 26, 1905, shows the remains of a wagon rutway in a Roman road in the neighbourhood of Syracuse*

## THE MILLWALL EXTENSION RAILWAY

*Some notes on the line which formerly gave access to North Greenwich*

THE remodelling and extension of the West India and Millwall Docks by the Port of London Authority in 1926-30 resulted in the use as part of the water area of a section of the track formerly occupied by the Millwall Extension Railway. As this portion was towards the northern end of the line it also impaired the use of that part of the railway southward of West India Docks. In consequence, the whole branch from Millwall Junction to North Greenwich was abandoned for through running

weight restrictions. In early years, a Great Eastern Railway locomotive worked passenger trains to the dock boundary, whence a horse took charge over the swing bridges, but in 1880 the Millwall Docks Company permitted the use of locomotives, and itself secured three of what were claimed to be the smallest standard-gauge passenger locomotives in the country. They were 2-4-0 side tank engines with 3 ft. 6 in. wheels and 9 in.  $\times$  18 in. cylinders, supplied by Manning Wardle & Company. Passenger trains



Sketch map showing the railways in the neighbourhood of the Isle of Dogs, with (right) enlarged inset of the former Millwall Extension Railway

purposes, but rail access to and from the south side of the docks is preserved by a diversion which runs along the north and west sides of the West India Docks.

The whole of this line between Millwall Junction and North Greenwich, which was known as the Millwall Extension Railway, was but 1 mile 49 ch. in length and ownership was divided originally between three companies. The line was opened from Millwall Junction to Glengall Road (Millwall Docks) station on December 18, 1871, and extended thence to North Greenwich on July 29, 1872; passenger traffic began on the latter date. It was single track throughout and had intermediate stations at South Dock and Millwall Docks; the former was the crossing place. The London & Blackwall Railway was the owner of only 36 ch. (5 ch. at Millwall Junction and 31 ch. at the North Greenwich end); the London & India Docks Company owned 41 ch.; and the Millwall Docks Company 52 ch. The two dock undertakings were absorbed in 1909 by the Port of London Authority which then, as successor to the Millwall Docks Company, worked the railway with its own engines. The London & Blackwall Railway retained its separate corporate existence until grouping under the Railways Act of 1921, but the Great Eastern Railway maintained the L. & B. sections of the Millwall Extension Railway.

On account of the line crossing three swing bridges and also being laid with permanent way of light construction, the rolling stock always had to conform to rigid axle-

were usually composed of old G.E.R. four-wheel coaches lighted by oil lamps. The Millwall Dock locomotives (numbered 3, 4, and 6) continued in service under the P.L.A. (bearing the numbers 28, 29, and 31) until 1922. The L.N.E.R. then worked the service with some ex-G.E.R. 0-4-0 saddle-tank engines until three rail motors purchased from the G.W.R. were ready for use. Two of these had four-coupled driving bogies and were built by the G.W.R., but the third had a six-coupled steam unit and was built originally for the Port Talbot Railway by Beyer Peacock & Co. Ltd.

In post-war years the passenger traffic declined very considerably and notices were issued on March 23, 1926, in the following terms: "On and after June 30, 1926, the Millwall Extension Railway and London & Blackwall Railway will be closed to passenger traffic." In point of fact the general strike of that year resulted in the services ceasing on May 3, 1926, and they were never resumed. The railway-owned 31-chain section of line between East Ferry Road and North Greenwich has been abandoned, and the greater part of the site has been disposed of. Some public interest was occasioned by the fact that during the demolition of the viaduct between Millwall Docks station and North Greenwich in November, 1937, one of the arches collapsed and unfortunately resulted in a fatal accident. This formed the subject of a Question in Parliament which we recorded on November 26, 1937.

## NEW BEYER-GARRATT LOCOMOTIVES FOR THE IVORY COAST

*Ten 4-8-2 + 2-8-4 metre-gauge engines have been built at the works of the Société Franco-Belge de Material de Chemins de Fer, Raismes (Nord), France, for the Abidjan-Niger Railway*

AN order for ten metre-gauge Beyer-Garratt locomotives has just been completed at the works of the Société Franco-Belge at Raismes (Nord), France, in collaboration with Beyer-Peacock & Co. Ltd. for the Abidjan-Niger Railway, which serves the Ivory Coast, French West Africa. The locomotives are an elaboration of the Blida-Djelfa (Algerian) Beyer-Garratt engines, which in turn were a development of the Kenya & Uganda engines. Their principal particulars are as follow:—

Cylinders (4), diameter ..	430 mm.	17 in.
stroke ..	600 mm.	24 in.
Coupled wheels, dia. ..	1,300 mm.	4 ft. 3 in.
Heating surface—		
Tubes (inside) ..	167.7 sq. m.	1,805 sq. ft.
Firebox ..	17.3 "	186 "
	185.0 sq. m.	1,991 sq. ft.
Superheater (outside) ..	24.0 "	258 "
Combined total ..	209.0 "	2,249 "
Grate area ..	4.4 sq. m.	47 sq. ft.
Boiler pressure ..	14 kg. per sq. cm.	200 lb. per sq. in.
Tractive effort (at 75 per cent. b.p.) ..	17,920 kg.	39,424 lb.
Tractive effort (at 85 per cent. b.p.) ..	20,300 kg.	44,660 lb.
Maximum axleload ..	11,700 kg.	11.5 tons
Total weight in working order ..	150,600 kg.	148 tons
Water capacity ..	28,000 litres	6,160 gal.
Coal ..	18 cu. m.	636 cu. ft.
Wood ..	6,000 kg.	5 tons 18 cwt.

The Beyer-Garratt locomotive was originally introduced on the west coast of Africa in 1926, when three engines were supplied for the 2-ft. 6-in. gauge Sierra Leone Government Railways. These were followed by the large eight-coupled locomotives on the Nigerian Railway in 1929. Since that date many engines of this type have been delivered to Sierra Leone, including the private 3-ft. 6-in. gauge line in that Colony, and also to Nigeria, so that the decision of this important French colonial railway to adopt the type provides a further example of its utility. It is also understood that the Cameroons are likely to introduce Beyer-Garratt engines of similar design to the Ivory Coast type in the near future.

The Port Bouet—Abidjan—Bobo Dioulasso line is 500 miles in length and laid to the metre gauge with Vignoles rails of 50 to 60 lb. per yd. Up to kilometre 182 the maximum gradient is 2.5 per cent. (1 in 40); the gradient gradually flattens to approximately 1 per cent. (1 in 100) over the last 300 miles. The minimum radius of curves on the main line is 460 ft., and in sidings 330 ft. The maximum widening of gauge is  $\frac{3}{8}$  in., and maximum superelevation  $4\frac{1}{2}$  in. The new locomotives are to be allotted heavy train loads; for example, 365 tons on a curve of 460 ft. radius and gradient of 1 in 40 at about 15 m.p.h. They must also be capable of attaining a speed of 45 m.p.h. with a train of 750 tons on straight, level track. The engines are designed for burning a dry hard wood fuel and a certain amount of mahogany waste, but the duties referred to above are based on a proportion of coal—for wood only the speeds are proportionately lower.

As will be seen, the general appearance of the locomotives is somewhat novel compared with that of the usual British-built Garratt. Although the shaping of the tank sides gives more light and access for inspection, it

has, of course, the disadvantage of reducing the water capacity. The large screens to prevent smoke from beating down in front of the cab will also be noted. The boiler, designed to give maximum efficiency for burning wood, is of the usual Garratt type and embodies features which have been found satisfactory on the Algerian express passenger Beyer-Garratt locomotives. The inner firebox is of copper, and the firebox stays, of manganese bronze, are pierced their full length by a 6-mm. hole. The firehole door is of the counterbalanced type opening to the inside of the firebox. Fixed bars for burning wood and a large drop grate are provided.

The 211 boiler tubes and 32 superheater flues are of weldless steel, and the superheater is of the Compagnie des Surchauffeurs type. An ash ejector and a spark arrester are fitted to the smokebox. The chimney is of the double type arranged abreast. The blastpipe is of the P.L.M. double variable type with double crosspieces permitting easy adaptation to the various conditions of firing. An annular blower is also fitted.

Two Thermix injectors feeding the boiler are each capable of a delivery of more than the maximum output of the boiler, namely, 3,300 galls. an hour per injector. Of the multiple valve type, the regulator valve is incorporated in the superheater header. Four fusible plugs are provided in the crown of the firebox. Fittings include: three water gauge test cocks of the needle valve type; a Fournier pyrometer; three safety valves; and arrangements for sprinkling the ashpan, smokebox, and fuel with water.

A cast steel turret, isolated from the boiler by a stop valve, feeds the various auxiliaries, such as injectors, blower, whistle, turbo-generator, and vacuum ejector. The cast steel turret, isolated from the boiler by a stop valve double capacity of the two tanks is 6,160 gall., which is sufficient for the maximum distance of 107 miles between the two most widely separated water stations. Provision in the bunker is made for the possible subsequent conversion of these engines to mazout (oil) burning.

Frames are of the plate type design in accordance with Beyer, Peacock & Company's latest practice. The weight throughout is compensated in the usual Garratt fashion.

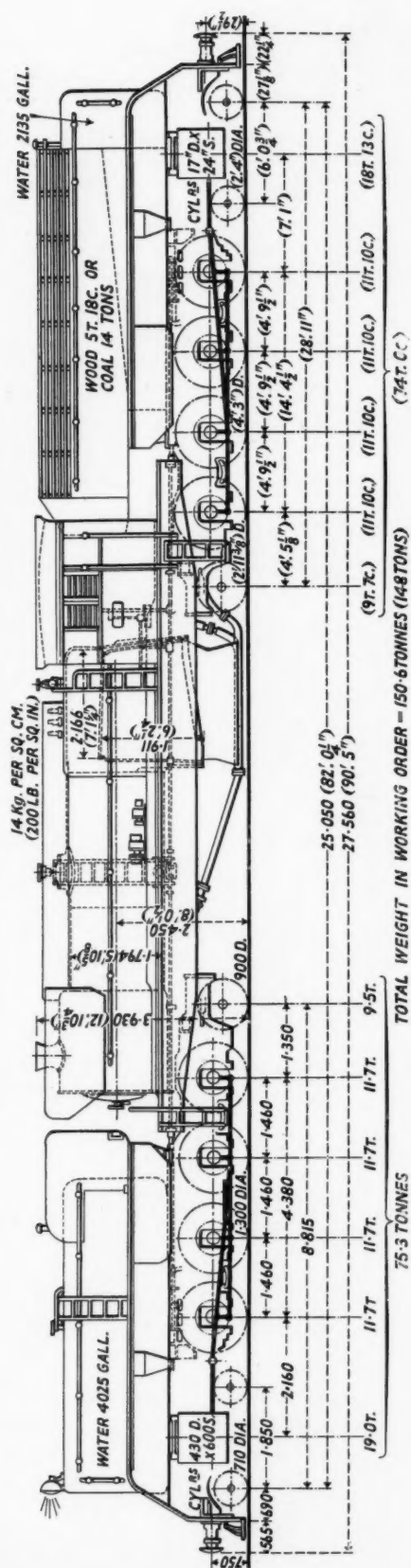
### Cylinders and Valve Gear

A new design of reversing gear operates the Walschaerts type valve gear. A hand lever in the cab opens or closes steam to a centrifugal steam motor placed on the boiler cradle, from which shaftings run to each valve gear, crossing the articulation gap by means of universal joints and a telescopic arrangement. Each rod finishes in a worm, actuating a block to which the lever operating the radius rod is connected. Check sectors, in addition to an indicator in the cab, are arranged at the valve gear. The cylinders and cylinder covers are of cast steel. The pistons are of forged steel fitted with three C.I. rings. Hauber type packings are used on the piston rods and tail rods. Like that on the Algerian Garratts, the crosshead arrangement is of the single bar type. Forced lubrication to the cylinders is by Bourdon mechanical lubricators arranged with sight feed. The crossheads, of forged steel, have detachable slipper-blocks and bronze slippers lined with white metal. The mechanical lubricator also supplies oil to the pivots, ball joints and various other parts. A double pressure





*General view of leading end of engine showing transverse double chimney*



*New Beyer-Garratt 4-8-2 + 2-8-4 locomotive, Abidjan-Niger Railway, Ivory Coast*

gauge in the cab indicates the pressure in the valve gear of two groups of cylinders.

The cab is closed and weatherproof; it has two removable windows in the sides, and a roof with a double wall as a protective screen against the tropical sun. A double set of teak louvres enables the side wall to be similarly screened. A speed indicator is fitted at the end of the reversing gear so as to be easily visible to the driver.

The locomotive is fitted with a steam brake and a screw hand brake, coupled with, but acting independently of, the steam brake. For braking the train automatic vacuum brakes on the Jourdain-Monneret system, operated by a compound ejector of the super Danton type, are provided.

The coupling, of the screw link type with side buffers, is 0.75 m. above rail level; the hook is reinforced to a breaking strain of 70 tons.

Liberal dimensioned sanding gear is fitted. All the coupled wheels are sanded for forward running, and the driving wheels are sanded for both directions. The trailing wheels are not sanded.

The lighting installation, known as the Electrom-Stone, comprises two groups—the first a 500-watt turbo-alternator feeding the cab, headlight and various lighting on the engine; and the other a 1,500-watt Sunbeam generator for the lighting and ventilation of a certain number of passenger carriages.

## REFLOORING A ROAD-RAIL BRIDGE IN INDIA

*In reflooring the roadway on the busy rail-cum-road bridge over the Indus Sukkur Channel, improved facilities for maintenance were provided*



*General view of bridge over the Sukkur or west channel of the Indus at Sukkur, looking upstream*

THE Sukkur Channel bridge, consisting of three through-type spans of 90, 230, and 270 ft. respectively, carries a single line of broad-gauge track, a road, and two footways (outside the main girders) across the western channel of the River Indus at Sukkur. Together with the famous Lansdowne cantilever bridge over the eastern channel, it was opened in 1889 and provided the closing link in the first chain of all-rail communication between Karachi and the North-Western frontier area centred upon Quetta.

The road and railway share the same deck and both the bridges are worked "level-crossing" fashion. The floor system on the Sukkur Channel bridge conformed with the practice of the last century, the rails being spiked to longitudinal timbers wedged in the bosom of built-up channel or trough section stringers. The roadway was of 1½-in. thick kikar timbers laid diagonally across and nailed to other timbers fitted into the valleys of 7-lb. corrugated iron sheeting (really troughing 3 in. deep, ⅝ in. thick and 4 in. pitch) laid transversely across the gaps between the rail stringers and supplementary road stringers, adjacent to the main girders.

This type of flooring did not lend itself to easy maintenance. Neither the insides of the stringers nor the top of the corrugated iron sheeting could be examined and painted without the wholesale removal of timbers, and as animals form by far the major part of the road traffic, it is not surprising that corrosion was considerable.

When, in 1937, it was found that much of the roadway decking had reached the end of its useful life, it was decided to replace the iron-and-wood floor with a lighter one of 4 in. thick reinforced concrete slabs, cast *in situ*. The rail stringers though corroded to some extent on

their inner sides were found fit to be retained, but, as many of the longitudinal timbers, after having suffered damage in the difficult removal, would have had to be replaced, some method was sought to improve facilities for maintenance. Longitudinal rail-bearing timbers have never been satisfactory on bridges because the line of spike holes, falling in the same line of the grain, leads to early splitting with subsequent difficulties in maintaining the gauge. So it was decided to dispense with the timbers altogether, and to provide small mild steel stools instead. These stools, some 8 in. high, consist of short pieces of angles or channels welded together and finished top and bottom with flat plates. The stools are arranged for bolting direct to the bottom of the stringers (packings are inserted to adjust the level of the rail) and the tops are sloped to the cant of the rails, which are secured directly to the cap plates by standard steel jaws and wedges as supplied for use with steel sleepers.

As the bridge had to be kept open to trains throughout the 24 hr.—with short periods of 2 or 3 hr. during which the line could be blocked for work on the track—and to road traffic during the day, some ingenuity was necessary during the casting of the central slabs between the rails. The side slabs presented no difficulty, one-way traffic being introduced and vehicles kept to the other side and the centre part of the decking, but the casting of the middle slabs was much more difficult, as there was not enough room for even a single line of traffic between the rails and the main girders. The difficulty was got over by the use of a temporary timber drawbridge of medieval pattern. This consisted of three lengths of 15 ft. spanning the centre part of the decking, hinged in one of the side gutters, and lifting transversely up against one of



The draubridge in course of being raised for a train to pass. Note safety locking hooks on timber bolted to main girder

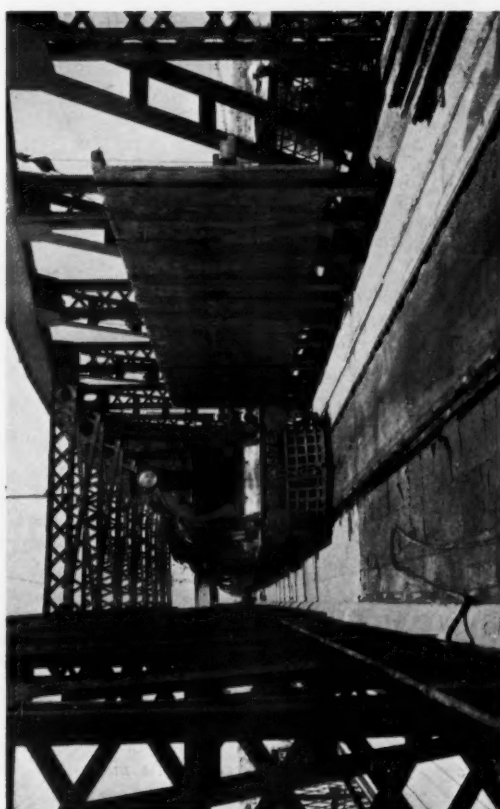


Comb pattern expansion joint set in position prior to casting side slabs of r.c. roadway decking

REFLOORING A ROAD-RAIL BRIDGE IN INDIA



The temporary timber draubridge lowered for road traffic, with supplementary run-off timbers in foreground



Draubridge raised and train passing. Locking hooks secure draubridge timbers half-way up their height as raised





Rail in position on new steel stools (not yet correctly spaced). Note new and old roadway floorings

the main girders, to which they were automatically hooked whenever a train was to pass. This 45-ft. drawbridge was moved along the length of the bridge as the work progressed. Raising and lowering was controlled by hand-operated winches placed on one of the footways. It was found that 3 min. were ample for the change-over from road to rail traffic or *vice versa*. The drawbridge was supplemented with a short length of ordinary loose timbers at one end.

The slabs have been reinforced with B.R.C. fabric and as no wearing coat has been provided, the top surface has been treated with two coats of sodium silicate solution. Particular attention has been paid to drainage; the side slabs have been given a slope to a side gutter, provided with an adequate number of drains, and the central slabs have slopes away from the rail stringers towards the centre of the track where there is another row of drains.

Special comb joints—somewhat similar to but an improvement upon those in use on the temporary Waterloo Bridge in London—have been provided at the expansion ends of the spans. These consist of twin sets of alternate long and short plates arranged like the teeth of a comb so that the longer ones on one span come opposite the shorter ones of the other. These teeth are shaped so that the joints are entirely self-cleaning with the movement of the spans under changes of temperature. These comb expansion joints provide a perfectly unbroken level surface on the road and avoid transmitting any bump which might accelerate wear in the adjacent concrete slabs.

The reflooring of the Sukkur Channel bridge, completed in September, 1938, has been carried out by the staff of the Bridge Department of the N.W.R., the welded stools and comb expansion joints being fabricated in the bridge workshop at Jhelum.



The temporary building on the concourse at Waterloo station, Southern Railway, in which is housed the "Fighting for Freedom" exhibition organised by the main-line railways to further the "square deal" campaign (see also pages 337 and 390)

## LONG RAIL WELDING

*A short description of the practice adopted by the Delaware & Hudson Railroad of the U.S.A. where single lengths of rail up to 7,700 ft. are found*

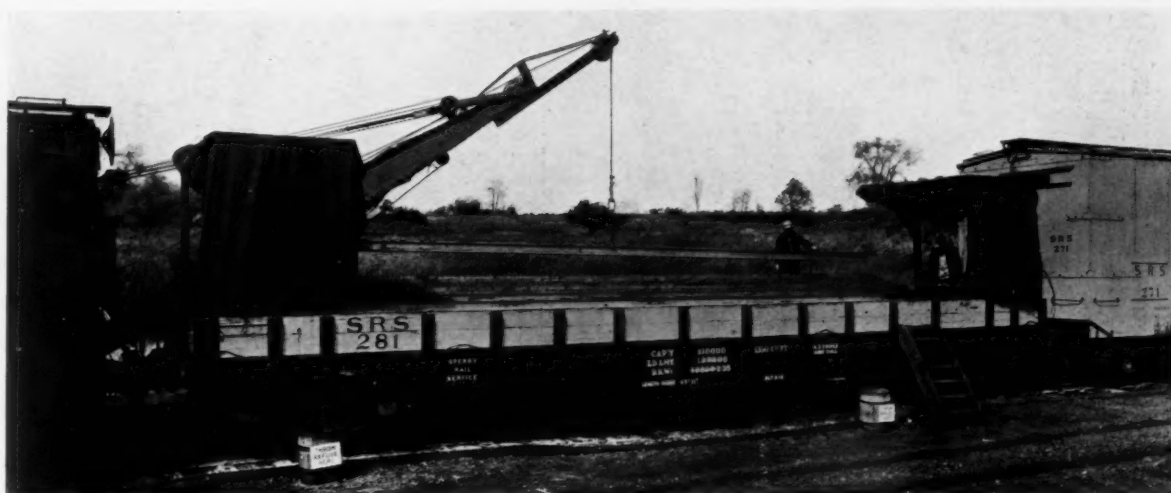
THE welding of rails into long lengths has now become a standard feature on many railways, but the distinction of having decided to eliminate all rail joints, except where they may be necessary in connection with track circuiting and point and crossing work, remains with the Delaware & Hudson Railroad. In our issue of October 15, 1937, we briefly reviewed (page 634) the practice of that company, and we are now able to describe its subsequent development which was so largely due to the late Mr. H. S. Clarke, till last summer the company's Maintenance of Way Engineer. It was from him as well

as Sperry Rail Service that we received the photographs illustrating the use and handling of the long rails, some of which we now reproduce. The Delaware & Hudson has a contract with Sperry Rail Service for the larger part of its programme of rail welding. All the flash butt welding carried out under this contract includes subsequent heat treatment of the welds for relieving any abnormal stresses.

The welding plant, developed by Sperry in co-operation with the General Electric Company, comprises a welding car containing the resistance welding machine; a generator



*Welding plant in operation. Next to the locomotive, which supplies steam for the turbo-generators, is the generator car; then a box car used as an office for the staff; next the rail rack car and the welder car into which it feeds the 39-ft. rails. Beyond are the flat cars on which the finishing equipment is mounted*

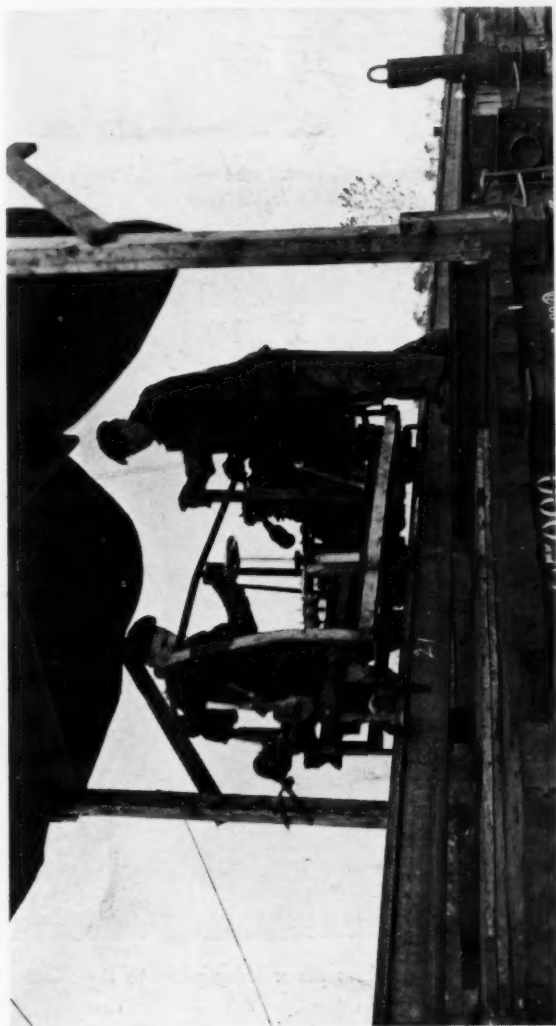


*Loading 39-ft. rails on to the rail rack car for feeding to the welder on right*



*Completed track with long welded rails fixed to sole plates by M & L type spring clip fastenings. Note the ample ballast*





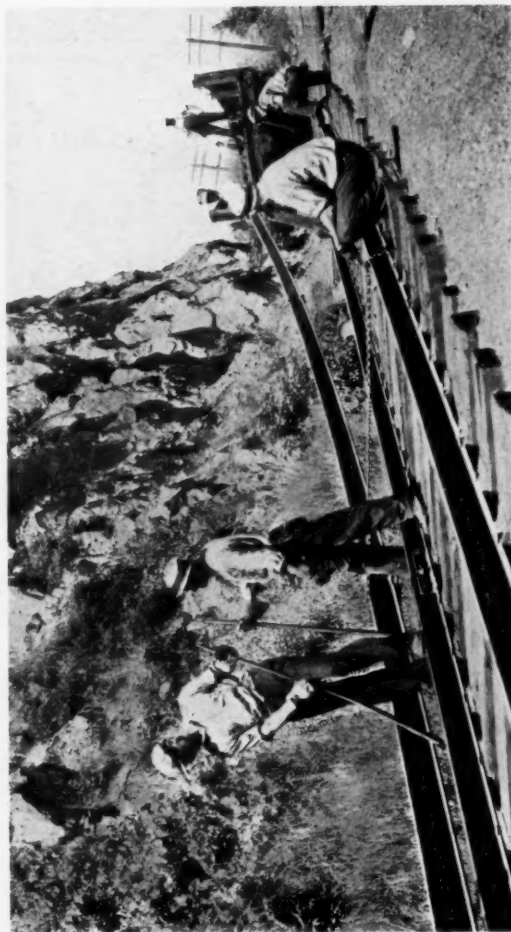
*Grinding upset metal off welded joint*



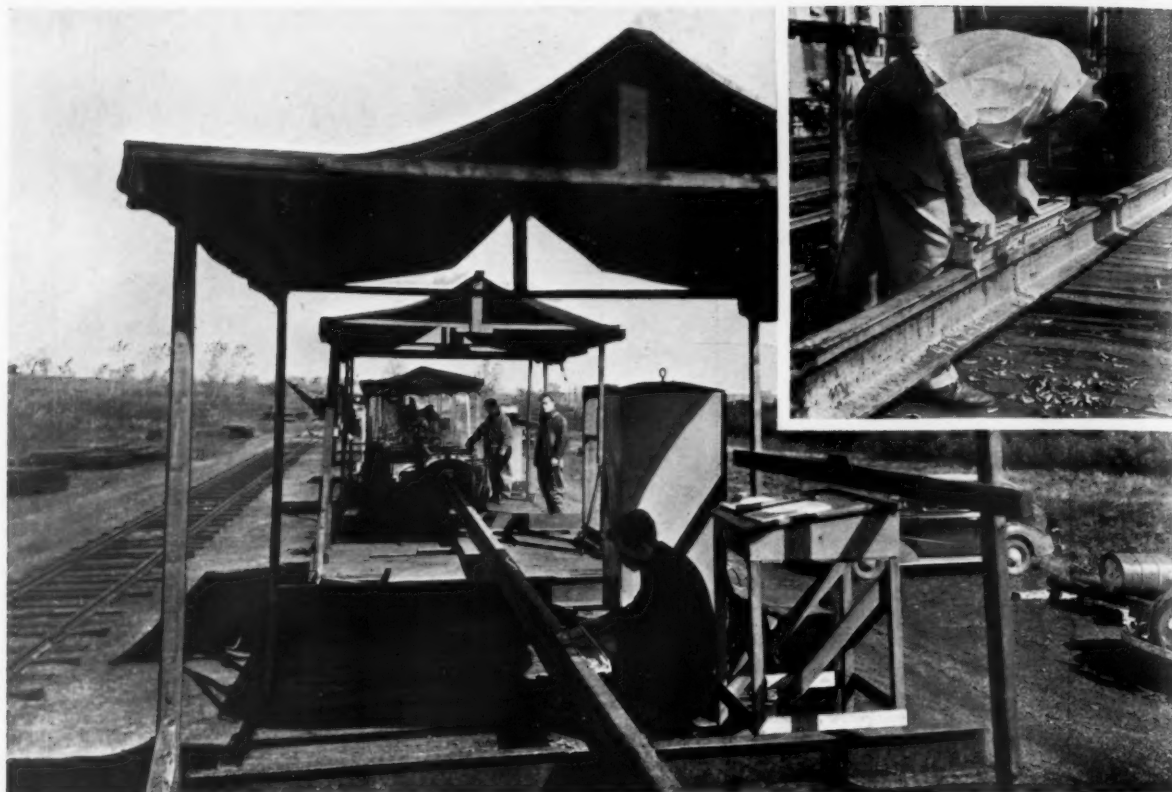
*Transporting long welded rails*



*Close-up of weld and of M & L spring clip rail fastening*



*Unloading long welded rails preparatory to relaying*



*Operations proceeding on rails after welding. Checking horizontal and vertical alignment and offset with alignment gauge in foreground (and inset). Normalising plant beyond in middle distance*



*Stacking long welded rails ready for use. The middle rail is being pulled from the welding plant to the stock bank by means of a winch in the distance*

car housing two turbo-generators, one for the welder, and one for the auxiliary equipment; a steam locomotive to supply steam for the turbines; a railrack car for lining up and otherwise preparing the 39-ft. rails for movement to the welding machine; a series of five flat cars on which the stress-relieving equipment and joint girders are mounted; and the requisite number of flat cars for subsequent transport of the long rails to the site of re-railing or the stock bank.

While each weld is being made, the final operations are carried out on the welds already completed. These operations, which proceed on five joints at a time, complete the rail for service in the track. The first operation is the heat treatment for stress-relieving through the weld area, and the others involve the grinding away of the upset metal produced in the process of welding. As the strings of rails are extended by each new length they are pulled forward through the welding machine on to the storage cars by means of a cable and an electrically-operated winch on a flat car at the far end of the storage cars. As many as 12 of the long rails have been lined up on cars and taken out to the line without any difficulty. The Sperry company provides six men for the work in addition to from 10 to 12 men provided by the railway company, and production is from 100 to 166 joints a working day of two eight-hour shifts. Extensive research relative to the many phases of welding, stress relieving and slow cooling were made over a period of years by Sperry and the General Electric Company. Flash butt welds were subjected to continuous rolling load fatigue tests under the severe conditions of a 65,000 lb. wheel load, with head and base alternately in tension. Many other routine rail tests were also made, including

the standard A.R.E.A. drop tests in which 6 ft. lengths of 131 lb. rail, with welds in the middle, were supported at 4 ft. centres, and a 2,000 lb. tup dropped from a height of 22 ft. Three and four blows were frequently required to break the test piece, and in some cases final fractures occurred only at the third or fourth blow. Both medium manganese and carbon steel rails were included in the tests.

By the end of 1937 the Delaware & Hudson had approximately 45 track miles of continuously welded track and no trouble had been experienced with it. The longest unbroken length of rail lies  $5\frac{1}{2}$  miles south of Schenectady, and extends for 7,700 ft. This is believed to be the longest piece of welded rail in the world. It is, of course, in open track and subject to atmospheric temperature variations from  $-15^{\circ}$  F. to  $+115^{\circ}$  F. The normal length of rail produced by the Sperry plant is about 1,700 ft. long, this being found most convenient. Thermit pressure welding is used to join the long lengths in the track.

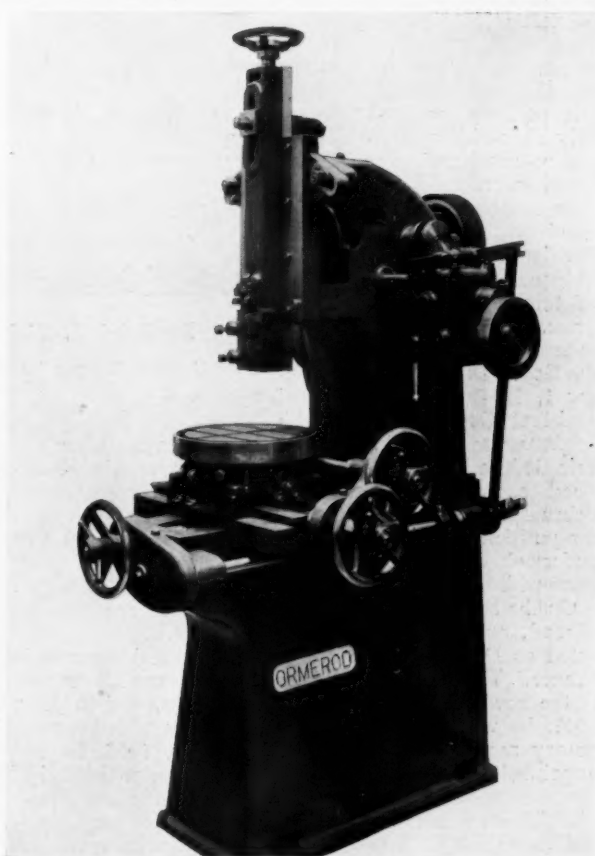
It will be seen from some of our illustrations that the finished track is extremely well ballasted and that the flat-bottom rails, of 131 lb. standard section, are held to the soleplates by means of powerful spring clips of the M & L type. The soleplates themselves are fixed to the sleepers independently by coach screws. So long as this fastening effectively prevents movement of the rail relative to the soleplate and sleeper and the efficient ballasting prevents movement of the sleeper relative thereto, expansion and contraction cannot occur, the forces set up by their prevention taking the form of inherent compressive or tensile stresses respectively, having no effect on the carrying strength of the rail.

## A NEW SLOTTING MACHINE

*Swivel ram type adaptable for use in railway shops*

**O**RMEROD SHAPERS LIMITED has recently added to its range of slotting machines by introducing one of the swivel ram type. These machines are built in two sizes, with 4-in. and 6-in. stroke. The ram guide, which is of generous proportions in regard to length and width, is mounted on a large diameter pivot, and may be swivelled through 5 deg. either side of the vertical plane. An accurately graduated scale is provided showing the angle of swivel, and the ram guide is clamped in position by large locking bolts. The base of the machine is of ample area, to give rigidity under working conditions. The table is of the compound circular type, having hand- and cam-operated self-acting reversible and variable power feeds in the longitudinal, transverse, and circular traverses. Ball thrust washers are fitted to the traverse screws, and safety devices prevent damage through overfeeding. The table is indexed round the outer edge.

The machines may be arranged to drive direct from the line shaft through fast and loose pulleys, or may have a self-contained motor drive. The motor is mounted on the rear of the machine, and the drive taken through vee ropes to a powerful friction clutch. A change speed unit gearbox gives three rates of speed to the ram. The change speed lever is mounted on the side of the box for ease of operation, and the clutch lever, or belt-shifting lever, is placed within easy reach of the operator. The final drive to the ram is through the Whitworth quick return motion.





## SIR RALPH WEDGWOOD

*The first Chief General Manager of the L.N.E.R.*

THE retirement of Sir Ralph Wedgwood on March 3 from the position of Chief General Manager of the London & North Eastern Railway marks the close of a chapter in post-war railway history, for there were big problems to undertake in the task of welding into one organisation the numerous elements comprising the Eastern group of railways. This aspect of his work is referred to in greater detail in an editorial article on page 340.

Ralph Lewis Wedgwood was born in 1874 and was educated at Clifton and at Trinity College, Cambridge. He entered the service of the former North Eastern Railway in September, 1896, at the age of 22, under Sir George Stegmann Gibb. In 1898 he was transferred to West Hartlepool, and served in the Dock Superintendent's Office for some years, latterly as Assistant Dock Superintendent. He returned to York as an assistant in the office of the General Traffic Manager. On the re-organisation of the staff of the Traffic Departments in January, 1902, he was appointed District Superintendent at Middlesbrough, his first independent office. In January, 1904, he became Secretary to the company in succession to Mr. C. N. Wilkinson, but held this position for a short time only as, at his own request, he was re-transferred to the Traffic Department.

In October, 1905, Mr. Wedgwood was appointed Northern Divisional Goods Manager with headquarters at Newcastle, and continued to serve there for six years. In connection with the re-arrangement of the work of the Goods Department on October 1, 1911, he was appointed Assistant Goods Manager with headquarters at York, and shortly afterwards, when Sir Eric Geddes became Deputy General Manager, Mr. Wedgwood succeeded him as Chief Goods Manager. In February, 1914, on the retirement of Mr. Philip Burt from the position of Passenger Manager, Mr. Wedgwood also undertook control of the work of the Passenger Department while retaining his position as Chief Goods Manager.

On the outbreak of war he volunteered for army service abroad, and with the rank of Major, R.E., for a time acted as D.A.D.R.T. in the Transport Establishment in France. The Government then decided to use his services in the newly-formed Ministry of Munitions, and in July, 1915, he was transferred to that Ministry with the temporary rank of Lt.-Colonel. In October, 1916, he was appointed Director of Docks under the Director-General of Transportation (Sir Eric Geddes) with the temporary rank of Brigadier-General. He received the C.M.G. on June 4, 1917, and exactly a year later, the C.B. During his service in France Mr. Wedgwood received the decoration of

an Officer of the Legion of Honour, and was appointed a Commander of the Belgian Order of the Crown.

He returned to the North Eastern Railway in June, 1919, and held the position of Chief Goods Manager and Passenger Manager, and in August, 1919, added to these offices that of Deputy General Manager. Mr. Wedgwood succeeded Sir A. Kaye Butterworth as General Manager of the North Eastern Railway at the beginning of 1922. Mr. Wedgwood was Chairman of the Goods Managers' Conference of the Railway Clearing House, 1920, and has at different times given important evidence before the Rates Advisory Committee on behalf of the railway companies generally.

The prominent part which he took in connection with the passing of the Railways Act, 1921, left no doubt as to his suitability for the high office of Chief General Manager of the L.N.E.R. when that company came into being at the beginning of 1923 as the result of grouping. His name was included in the King's Birthday Honours in 1924, when he was given the honour of a knighthood. Unlike the other main-line railway companies, the L.N.E.R. adopted a divisional system of management with divisional general managers in charge of group areas corresponding approximately to one or more of the separate pre-grouping railway companies. Sir Ralph Wedgwood thus became the only officer bearing the title of Chief General Manager in Great Britain. Moreover he has held this position for a period of 16 years.

For the year 1925 in which the L.N.E.R. held the railway centenary celebrations at Dar-

lington in conjunction with the meeting in this country of the International Railway Congress, Sir Ralph was elected Chairman of the General Manager's Conference of the Railway Clearing House. He also accepted the chairmanship of the board of management of the Railway Benevolent Institution for the year 1925.

Sir Ralph Wedgwood's appearance as a railway witness before Parliamentary Committees, Rates Tribunals, and Royal Commissions are too numerous to be specified in detail. He was a member of the Weir Committee on Main-Line Electrification in 1930-1931, and has been for some years a member of the Electricity Board and the Chinese Government Purchasing Commission. In 1936 he was invited to visit India as Chairman of the Committee of Inquiry into the Indian Railways. He was a member of the Salter Conference of 1932 on the recommendations of which the Road & Rail Traffic Act of 1933 was based, and he has taken a leading part in the proceedings of the Transport Advisory Council.



*Sir Ralph L. Wedgwood, C.B., C.M.G.*

Chief General Manager, London & North Eastern Railway, 1923-1939

## RAILWAY NEWS SECTION

### PERSONAL

Mr. E. J. H. Lemon (Director-General of Production, Air Council) and Major-General A. F. A. N. Thorne (General Officer Commanding, London District) were received by His Majesty the King at Buckingham Palace on February 15.

Mr. J. D. Ziesecke, who has been associated with the representation in Cologne of the Southern Railway and

Mr. H. C. Young, Acting Purchasing Agent, Delaware & Hudson Railroad, has been appointed Purchasing Agent.

Both appointments became effective on February 1.

Mr. W. Dunsmuir, who, as recorded in our issue of February 10, has been appointed District Locomotive Superintendent, Inverness, L.M.S.R., joined the service of the former Caledonian Railway in December, 1907, serving his apprenticeship in the workshops at

old North British Railway Company in the Engineer's Office at Edinburgh under the late Mr. James Bell, Chief Engineer, from 1881-5, and was appointed District Engineer, Carlisle, in 1893. In 1916 he was transferred as District Engineer, Thornton, where he remained until his retirement. Mr. Anderson's genial presence will be very much missed among his friends and associates in the old North British and London & North Eastern Companies. He was the last of the old North British



**Mr. J. D. Ziesecke**

General Agent, Cologne, Southern Railway,  
1934-38



**Mr. W. Dunsmuir**

Appointed District Locomotive Superintendent,  
Inverness, L.M.S.R.



**The late Mr. David L. Anderson**

District Engineer, Thornton Junction, L.N.E.R.,  
1916-28

previously of the former S.E. & C.R. for a long period of years, retired on January 1, as recorded in our issue of February 17. He was educated at the High School in Cologne and was subsequently employed in commercial business in Germany, and during 1898-1900 in Liverpool and London. In the latter year he joined the South Eastern & Chatham Railway as a clerk at its General Agency in Cologne and rose to be Chief Clerk there in 1920. From 1910 until the outbreak of war he was Acting British Consul at Cologne. In 1931 Mr. Ziesecke was promoted to be Assistant Agent at the Cologne General Agency, Southern Railway, and was appointed General Agent towards the end of 1934 (as announced in our issue of November 30 of that year).

Mr. P. O. Ferris, whose appointment as Acting Engineer, Maintenance of Way, Delaware & Hudson Railroad, in succession to the late Mr. H. S. Clarke, was recorded in our issue of July 22 last, has now been confirmed as Engineer, Maintenance of Way.

Polmadie and St. Rollox. After grouping, in July, 1929, he was appointed Head Office Inspector, Motive Power, and in October, 1933, went to Carlisle (Kingmoor) as Foreman Fitter. For a time Mr. Dunsmuir acted as Assistant to Mr. E. L. Booth, District Locomotive Superintendent, at the former Midland sheds, Durrhill. He was appointed Locomotive Foreman at Aberdeen in April, 1938, and took up his new appointment at Inverness on February 1 of this year.

The L.N.E.R. announces that Mr. R. B. Temple, Goods Manager's Office, York, has been appointed Assistant District Goods Manager, Leeds, in succession to Mr. B. X. Jessop, who was recently appointed District Passenger Manager, Leeds (see our issue of February 3).

We regret to record the recent death of Mr. David L. Anderson, who retired from the post of District Engineer, Thornton Junction, Scottish Area, L.N.E.R., in 1928. Mr. Anderson was trained as a civil engineer with the

district engineers appointed in the latter part of the last century, and there were many representatives of the old régime in attendance at his funeral at Stanwix Cemetery, Carlisle.

#### G.N.R. (IRELAND) APPOINTMENTS

The directors of the Great Northern Railway (Ireland) have made the following appointments:—

Mr. H. R. McIntosh, Assistant Mechanical Engineer and Running Superintendent, to be Mechanical Engineer.

Mr. C. H. Slater, to be Civil Engineer.

Mr. R. W. Meredith, Works Manager, to be Works Manager and Assistant Mechanical Engineer.

Mr. W. A. F. Graham, Chief Clerk, to be Assistant to the General Manager.

Mr. H. R. Browne, to be Assistant Civil Engineer.

We regret to record the death on February 21 at the age of 55 of Mr. William Edward Maddams, Manager of the Government and Railways Department of the General Electric Co.

Ltd., which company he joined in 1899. During his 40 years' service he acquired a wealth of electrical experience and a wide circle of friends in the industry.

Mr. J. A. Ellis, Commissioner of Railways, Western Australia, completed the term of his five-year appointment on January 15. The Railways Act provides that the Commissioner shall be appointed for a term of five years, and at the expiration of the term he shall be eligible for reappointment for a further term of five years; the Minister for Railways, the Hon. F. C. L. Smith, has now announced that the Government has decided to renew Mr. Ellis's appointment for a further term at a salary of £2,000 a year. Before his appointment as Commissioner, Mr. Ellis was Assistant Chief Civil Engineer of the Railway Department. He succeeded Mr. E. A. Evans as Commissioner at the age of 47 years. He was trained as an engineer in England and served in that capacity for nine years with a well-known British firm of railway and public works contractors on dock and railway works for the London & North Western Railway. Then followed 16 years service in the Queensland Railway Department, after which Mr. Ellis joined the Western Australian service and served for seven years, first as Engineer for Railway Construction and then as Assistant Chief Civil Engineer. He was selected as Commissioner from more than 40 applicants.

Mr. Charles H. Slater, M.Inst.C.E.(I.), A.M.I.Struct.E., who, as recorded on page 363, has been appointed Civil



Lafayette

Dublin

**Mr. Charles H. Slater**

Appointed Civil Engineer,  
Great Northern Railway (Ireland)



**Mr. J. A. Ellis**

Reappointed Commissioner of Railways, Western Australia, for a further term of five years

Engineer of the Great Northern Railway (Ireland), in succession to Mr. G. B. Howden, began his engineering career with A. Handyside & Company, bridge and structural engineers, Derby, where he gained valuable experience in the design of all types of bridges and other work. In 1910 he joined the Great Northern Railway (Ireland) as Steelwork Assistant to the then Chief Engineer (Mr. F. A. Campion), and in 1924 was appointed his Chief Assistant. During this period the majority of the more important bridges on the system was reconstructed, and Mr. Slater was responsible, under the Chief Engineer, for their design and erection. He also assisted Mr. G. B. Howden in the reconstruction of the Boyne viaduct, Drogheda. Mr. Slater served with the Royal Irish Rifles (Pioneer) Battalion in France and Belgium from 1915 until about six months before the end of the great war, when he was transferred to the Air Ministry. He was awarded the Military Cross and was demobilised with the rank of Captain.

Mr. W. A. F. Graham, whose appointment as Assistant to the General Manager, Great Northern Railway (Ireland) is recorded on page 363, began his railway career in the Secretary's Department of the company in 1912. From 1919 to 1926 he was Confidential Clerk to the then Secretary and Assistant

General Manager, during which period he gained much experience in connection with the collection of information for the Standing Committee of General Managers of the Irish Railways, which was set up in 1920. Mr. Graham was also involved during that time in the preparation of applications to the Irish Railways Wages Board in regard to the salaries and wages of all railwaymen. In addition he acted as Clerk to the Appeals Committee of the Irish railways. In July, 1926, on the appointment of Mr. J. B. Stephens as General Manager, Mr. Graham was selected to fill the position of Chief Clerk. During the last 13 years he has been closely associated with all important wages negotiations and has acted as the company's representative on the negotiating committee set up under the Scheme of Negotiation. Mr. Graham has also gained considerable experience in connection with the operation of the various Acts dealing with road transport in Eire and Northern Ireland, and assisted in the preparation of the railway evidence for the committees of investigation set up by both Governments to inquire into the position of public transport.

Mr. Desmond Cannon Brookes, Manager of the Aluminium Information Bureau, Bush House, has left to take up a position with the Aluminium Union Limited. Mr. Cannon Brookes has been Manager of the bureau since its inception in 1937. It is conducted by the Northern Aluminium Co. Ltd., in whose Sales Department he has held a number of



**Mr. W. A. F. Graham**

Appointed Assistant to General Manager,  
Great Northern Railway (Ireland)



executive positions during the past seven years.

The new Manager of the bureau will be Mr. E. D. Iliff, B.Sc. (Eng.), who has been Technical Sales Adviser to the Birmingham works of the Northern Aluminium Co. Ltd. He will take up his duties at Bush House on March 6.

From *The London Gazette* of February 14: Regular Army Supplementary Reserve of Officers, Royal Engineers, Transportation: R. W. Wheeler (late Cadet C.S.M. Uppingham Sch. Contgt., O.T.C.), and V. H. Morgan, to be Second Lieutenants (February 15).

From *The London Gazette* of February 24: Territorial Army, Royal Engineers, Engineer & Railway Staff Corps: Lt.-Colonel Sir David J. Owen, Kt., resigns his commission and retains his rank, with permission to wear the prescribed uniform (February 25).

Mr. D. E. Galloway, Assistant Vice-President, Canadian National Telegraphs, has been elected Chairman of the Telegraph & Telephone Section of the Association of American Railroads for 1939-40.

M. Antonini, Assistant General Secretary of the French National Railways Company, was recently promoted to the grade of Chevalier in the Legion of Honour. M. Antonini, a former student of the Ecole Polytechnique, entered the railway service in 1931. For seven years, he worked in direct collaboration with M. Raoul Dautry, then General Manager of the French State Railways. He was also associated with M. Dautry when the latter was President of the Compagnie Générale Transatlantique, and President of the Compagnie Aéropostale.

### Lord Dalziel's Fortune to Charities

Harriett Sarah, Baroness Dalziel, who died on December 7, left £465,607, almost the whole of which has been divided among various charities. Lady Dalziel was the widow of the first and last Lord Dalziel of Wooler, who died in 1928 and left a fortune estimated at £2,274,000. Lord Dalziel will long be remembered in the railway world as Chairman of the Pullman Car Company and President of the board of directors of the International Sleeping Car Company.

Lady Dalziel confirmed a settlement made on July 1, 1932, of £500,000 shares in International Sleeping Car Share Trust Limited in favour of the Cancer Hospital, St. Bartholomew's Hospital, and Dr. Barnardo's Homes (for the benefit of the Dalziel of Wooler Home). She stated in her will:—

Whereas I have during my lifetime carried out the desires of my late husband, and have distributed large sums of money to his and my relatives and friends, and also to various charitable institutions, and in many cases I have supplemented the wishes of my late husband and have distributed in all upwards of £500,000 since his death, in the circumstances, having no children, I feel justified in dividing what remains of my estate for the benefit of less fortunate individuals.

The bequests included:—

£20,000 to St. Bartholomew's Hospital, to be added to the Dalziel of Wooler discretionary fund (conditional upon the Governors maintaining the mausoleum in Highgate Cemetery).

£10,000 each to the Newspaper Press Fund, Dr. Barnardo's Homes (for the upkeep of the Dalziel of Wooler Home), the National Institute for the Blind, the London Hospital, the Church Army, the Royal Hospital and Home for Incurables, Putney, and the Cancer Hospital.

£5,000 each to the Hospital for Sick Children, Great Ormond Street, St. George's Hospital, the Salvation Army,

the Royal Scottish Corporation, King George's Fund for Sailors, University College Hospital, and King Edward's Hospital Fund.

£3,000 each to the Shaftesbury Homes and Arethusa Training Ship, the Evelina Hospital for Sick Children, the Royal Naval Benevolent Trust, Charing Cross Hospital, St. Thomas's Hospital, London Orphan School, the Alexandra Orphanage, and the British Sailors' Society.

£2,000 each to the Shaftesbury Society and Ragged School Union, the Gordon Boys' Homes, the Royal Alfred Aged Merchant Seamen's Institute, Miss Weston's Royal Sailors' Rest, the Royal Society for the Prevention of Cruelty to Animals, the National Society for the Prevention of Cruelty to Children, Queen Charlotte's Maternity Hospital, the Home of Compassion of Jesus, Thames Ditton, Lord Mayor Treloar's Hospital, the Royal National Lifeboat Institution, Royal Surgical Aid Society, Chelsea Hospital for Women, Spurgeon's Stockwell Orphanage, the Church of England Waifs and Strays Society, City of London Maternity Hospital, Providence Row Night Refuge and Home, Royal Association in Aid of Deaf and Dumb, Hospital for Epilepsy and Paralysis, Dogs' Home, Battersea, Vicar's General Fund of St. Martin-in-the-Fields (to be applied for those seeking shelter in the crypt), Lord Roberts Memorial Workshops, Ellen Terry National Homes for Blind and Mentally Defective Children, Metropolitan and City Police Orphanage, Clergy Widows' and Orphans' Fund (Diocese of London), Cecil Houses, St. Luke's Hospital for Advanced Cases, and East London Nursing Association.

£1,000 each to the John Benn Woking Ladies' Hostel, the People's Dispensary for Sick Animals of the Poor and the Royal Veterinary College (to be applied for the relief of sick animals).

Subject to a number of legacies to servants, relatives, and friends, Lady Dalziel left the residue of her property in trust for King Edward's Hospital Fund.

### Sir Ralph Wedgwood's Farewell Message

Sir Ralph Wedgwood, Chief General Manager of the L.N.E.R., whose retirement today is the subject of articles on pages 340 and 362, has addressed the following farewell message to the company's staff through the medium of the *London & North Eastern Railway Magazine*:—

"I retire from the service of the London & North Eastern Railway on March 3, and this is therefore my last opportunity of saying farewell to all my fellow-workers in the service. I should like at the same time to give them, through the *L.N.E.R. Magazine*, my best wishes for the success of their efforts in the future and for the prosperity of the organisation in which we all have played our part. After more than forty years as a railwayman, I am not going to resign the title now, though I pass out of the active list. Together, we have built up a fine organisation in the last seventeen years, and it has a fine spirit of its

own. We are proud of the London & North Eastern, and none the less so that each of us thinks his own old railway, now merged in the new unity, was in its time the best of the lot. I hope the tradition of those double loyalties, each reinforcing the other will not be lost as the date of our unification recedes. A railwayman's pride in his work is enriched by pride in his traditions, no matter how deep in the past their roots may be.

"It is no easy matter to leave the work of forty years—to sever the ties of fellowship with friends and colleagues, with all those, near and far, who have helped in the creative work of building up a great railway, and nursed their share of the sacred fire. But one cannot compromise with Time, and there is no greater satisfaction than to know that what we have helped to build will outlast ourselves. New generations arise, but inspired with the old spirit. Our motto is *Forward*, and

even in the face of falling revenues we have tried to put that watchword into practice. I am glad to leave in the knowledge that my successor is one who will carry on the tradition of progress, and that he will have the support of so many in all ranks who ask nothing better than to give their single-minded devotion to the service.

"It is customary when a man retires to wish him leisure and repose after the heat and burden of the day. I hope my friends will wish me nothing of the kind. I never found the day hot or burdensome, while it lasted: and now, of all times, one can feel little inclination for leisure or repose. There is so much to be done and the urgent need to do it. From some other sphere of work, I shall look back on a London & North Eastern Railway, united and progressive as of old, only I trust more prosperous. I hope you will give me your good wishes in the activities, whatever they may be, to which in these anxious times I may turn my hand. To you all I wish—Good luck and better days."

## SOUTHERN RAILWAY COMPANY

*Return on new electrification schemes—Popularity of train ferry service—Record Continental motor traffic—Reduction of freight train-mileage—Success of staff in selling transport—Wider coaches as contribution to easing rush-hour congestion*

The annual general meeting of the Southern Railway Company was held at Southern House, Cannon Street station, E.C., on February 23, Mr. Robert Holland-Martin, Chairman of the company, presiding.

The Secretary (Major L. F. S. Dawes) read the notice convening the meeting.

The Chairman: My lords, ladies, and gentlemen, last year, speaking at a moment when the political barometer, if not at "set fair," did not indicate storms, I told you that we had set such a course as should lead to even better results in the future, but I did take occasion to point out, particularly with reference to our boat train traffic on which so much of our revenue depends, that those traffics are dependent on the international situation of the day and that any change of conditions on the Continent might very quickly bring down our receipts. Well, as you all know, the political weather grew worse as the year wore on, and throughout last year we had storm warning after storm warning to the hindrance of business and pleasure. Bearing this in mind I hope you will agree that our great business has not felt the storm unduly. This is in great measure due to our General Manager, Mr. Gilbert Szlumper, whom we appointed to succeed Sir Herbert Walker. I feel that he has thoroughly justified our choice. Our new Solicitor, Mr. Smedley, and Mr. O. V. Bulleid, our new Chief Mechanical Engineer, have also entirely lived up to expectations. The latter has designed some fine and original new coaching stock, including buffet and dining cars that will both attract passengers and add to their comfort.

In the past year we have lost, by retirement in September last, Mr. Herbert Jones, our capable Electrical Engineer, who became the Electrical Engineer of the L.S.W.R. in 1912 and carried through the first South Western Railway electrification scheme. At the grouping of the railways in 1923, he was appointed Electrical Engineer of the Southern, and as such has been responsible for all the electrical business of the company, apart from the execution of new schemes. In his place we have appointed as our Chief Electrical Engineer his colleague, Mr. A. Raworth, who has been responsible for the preparation and carrying through of all our new schemes for electrification: how efficiently this work has been done is well known to all who travel on our electric lines.

### Mr. Charles Sheath

You will have noticed, with the regret that all his colleagues feel, that Mr. Sheath, so well known to all South Eastern Railway and, indeed, to all Southern Railway men, has decided not to offer himself for re-election as a Director. Mr. Sheath holds a record which I think will probably stand for all time. He has completed seventy-five years of continuous railway service. He became a junior clerk in the Secretary's Office of the South Eastern Railway Company in 1864. The then Secretary was Mr. Samuel Smiles, the well-known author and social reformer, a friend of George Stephenson, who, after being Secretary of the Leeds & Thirsk Railway from its opening in 1849, left it in 1854 to be Secretary of the South Eastern Railway, a post he held for 12 years: into what ancient history this takes us. In 1900 Mr. Sheath became Secretary to the S.E. & C.R. Companies' Managing Committee, retaining his position as Secretary of the South Eastern Railway which he had held since 1898, and holding both these posts to 1922 when he was given a seat on the board of the South Eastern Railway. At the grouping of the railways in 1923, he was, as a Director of the South Eastern Railway, elected to the board of the Southern. Since the amalgamation he has never missed an ordinary meeting of the board and in his service on five standing committees

out of a possible attendance at 351 meetings he has attended 341. As Chairman of the Southern Railway Superannuation Fund he has taken the chair at every meeting of the fund committee and at every annual meeting of its members, and has shown the greatest interest in its welfare. Such has been the 75 years' railway service of our colleague, from whom we part with deep regret that the inexorable penalty of increasing years should deprive us of a colleague whose seasoned, mature advice has been of great service to the railway. We all wish him happiness in his retirement and hope to avail ourselves, should occasion arise, of his advice and great experience.

In his place we recommend for election, or rather for re-election, Lord Kennet, who, as Sir Edward Hilton Young, was a Director of your railway from 1929 until 1931, when he became Minister of Health.

I assume that it is your wish, as usual, to take the accounts as read, but I will briefly go through them with you, commenting only on such items as are important enough to deserve it.

### Successful Debenture Issue

In the accounts in review, being those for the year 1938, there is no alteration under the head of nominal capital authorised and created, but you, of course, know that in January *this* year we created and issued £7,500,000 4 per cent. redeemable debenture stock, 1970/80. This will, of course, appear in the accounts for 1939. This issue, owing in great measure to the wise advice given us by Baring Bros. & Co. Ltd., and by our stockbrokers, Messrs. Laing & Cruickshank and Messrs. Cazenove, Akroyds & Greenwood & Company, was a great success, both as to its price and as to the time of its issue—matters very difficult to judge in these days of continuous international stress and crises. Why did we determine to make the issue at that time? On page 4, Account No. 4 (page 3 of short accounts), you will see our capital account is £12,800,000 overspent, that is to say, £2,100,000 more than last year. We estimate another £1,450,000 further expenditure on capital account before the end of the current year, and with further capital expenditure in prospect, your directors deemed it to be prudent in these very difficult days to make the Southern's cash position during the next few years secure by raising the necessary funds at what in the view of your board and its advisers was an appropriate time, bearing in mind the facts of your company's commitments and the future of interest rates which under existing conditions are somewhat obscure.

### Station Improvements

Expenditure on capital account during the past year is mainly made up as follows:—

*Electrification*.—Covering the completion of Portsmouth No. 2 Scheme (which was opened in July); the Ascot to Reading Scheme (which was opened on January 1, this year) and the starting of the Maidstone and Gillingham Schemes, £1,054,000.

*Additions and Alterations to Stations, &c.*—Including Chichester, Horsham, Deal, Strood, Twickenham, Templecombe, Westgate, and Teddington stations, say £207,000

Expenditure on stations has been heavy in this and recent years, but it is money well spent. The public appreciates and is attracted by modern stations and their amenities. Longer platforms enable longer trains to be run, and extended shelters add to the comfort of the public. Then, too, a new arrangement of the lines and signals adds to facility of working and, thereby, to rapidity of movement, as well as in many cases achieving operating economies.

We have spent on the new line from Motspur Park to Leatherhead (Motspur Park—Tolworth Section), £182,000;

on rolling stock (electric railmotor and coaching vehicles), £362,000; and on Southampton Docks (docks extensions, second stage, and additional accommodation), £212,000.

Now let us take the revenue receipts and expenditure of the whole undertaking, shown on page 6, Account No. 8, of the full accounts (page 3 of short accounts). Passenger train traffic was up by £68,000. Passenger traffic accounts for £36,000 of this, and mails and parcels were up by £32,000. The increase in passenger train traffic revenue is partly due to the 5 per cent. increase in fares, other than in the suburban area.

#### Company's Debt to Electrification

In the electrified areas there was an increase of £180,000, a very satisfactory increase and one that must make every shareholder realise how much the Southern owes to its electrified services. The capital spent on electrification in every case so far has earned a net income largely in excess of the interest required for the service of the loans. Of our more recent electrification schemes, Portsmouth No. 2—that is the route *via* Dorking, Horsham, and Chichester—showed for its first six months of working an increase in gross receipts of 13·2 per cent. over those obtained by steam working. Sevenoaks showed a further increase of 5½ per cent., Alton, Staines, and Guildford *via* Woking an increase of 9 per cent., and Guildford to Portsmouth (known as Portsmouth No. 1) an increase of 9½ per cent.

But against this increase in the electrified areas we have to set a decrease of £60,000 in our other passenger traffic, and, owing to political alarms and excursions, of £84,000 in our train traffics to the Continent and the Channel Islands. In 1938 the passenger journeys, including season ticket journeys, made on the Southern Railway were 371,000,000, a drop of 8,000,000 below the record figures of the Coronation year, 1937, which were, you will remember, also helped by the bus strike. In 1937 the figure was 379,000,000. The number of season tickets issued shows an increase over 1937 of 2,086.

Goods traffic decreased by £179,000. In the higher classes of goods traffic, this decrease is mostly in cement, paper, iron, and steel; and in the lower classes, sand, gravel, and building materials show the greatest declines. Recent statistics show that new house construction has slowed down more in the South of England than elsewhere, and the building of factories on new building estates has taken place elsewhere than in this company's area in the South of England, due partly to the crying needs of the distressed areas in other parts of England. Miscellaneous receipts were up by £9,500. In a word, the purely railway receipts at £22,012,000 show a decline of £101,500, compared with the £22,113,500 in 1937.

#### Increased Gross Passenger Receipts

I should like you to note now that Southern gross passenger receipts alone of those of the four railways show a slight increase, and our goods receipts have dropped by only 3½ per cent. as compared with the average decrease of the other three companies of 7½ per cent. This is of course due to the Southern being a passenger line. Some of you may have seen in the papers that the four main line railway companies are applying to the Railway Rates Tribunal for authority to increase the fares in the London Passenger Transport Area by 5 per cent. You will remember that in 1937 the tribunal authorised a general 5 per cent. increase of railway rates and fares, but as I mentioned in my speech last year, that increase did not apply to fares within the London area, so that at the present time the general level of fares within the London area is lower than it is outside that area. As you know, a very large part of our passenger traffic is within the London area, so we are very much hoping that the application which is now before the tribunal will be successful. If it is, we shall be greatly encouraged to push on with our efforts to improve the transport facilities within the area.

#### Results of Ancillary Services

Now let us take ancillary receipts. I will begin with steamboats and docks. Steamboat receipts are up by

£74,000. Our boats sailing to and from Southampton contributed £31,000; those from Dover and Folkestone £38,000, and from Newhaven £5,000.

Of the Dover and Folkestone receipts, £19,000, nearly half of the increase, was due to the train ferry. This service is becoming more and more popular; we are told again and again by our passengers that they have crossed the Channel without any disturbance to their rest, or knowing that they have been at sea. The passenger service is full to capacity every night and in consequence the Wagons-Lits Company has ordered six new coaches; 76,000 passengers crossed by the ferry in 1938, compared with 73,000 in 1937, and 76,000 tons of cargo were conveyed, as against 60,000 tons in 1937. Here again, if there really is a settlement of international differences in Europe, we shall benefit to an even greater extent.

The number of cars carried in the ferry increased from 1,637 in 1937 to 4,600 last year, for motorists have discovered that Dunkerque is a very good starting place for a French or Continental tour, and also that at Dunkerque and Dover the ferry gives the motorists the advantage of being able to drive themselves ashore. In 1938 we carried from our ports a record number of cars to and from the Continent, our figures showing an increase of 18 per cent. over those of 1937. Once more I would draw your attention to the fact that our steamboats are our principal ancillary business, and that our steamboat traffic very greatly affects our final results. It is satisfactory that an increase in our gross receipts of £340,000 from that traffic in 1937 should have been followed by an increase of £74,000 in 1938, a year of perpetual international crises.

#### Southampton Docks

Now as to Southampton Docks, the centenary of which we celebrated on October 12 last, when a memorial column was unveiled to mark the progress of the docks and their rise from very small beginnings to their great importance to the country today. Today Southampton is the premier passenger port of the Kingdom, dealing with 47 per cent. of the total passenger traffic of the country, compared with 18 per cent. at the next highest, and as a cargo port, it is fourth in importance with a total import, export, and re-export trade valued at £73,700,000. Unfortunately the clouded international atmosphere was inimical to progressive trade and our net receipts fell by £61,500. Of this reduction £10,500 was due to a smaller number of ships; £40,500 due to lesser tonnage of goods and receipts derived from their handling, and £16,500 to lesser use of the graving dock. Warehousing, on the other hand, was up £8,000. This strengthens us in our proposal for a scheme which we are examining carefully to build a new warehouse of modern design on our reclaimed land.

Should the international horizon clear, we may expect a greater movement of people and merchandise, and this, together with the increase in dock rates which has been sanctioned as from March 1 next, gives us hope for the future.

Progress continues to be made on the docks extension estate of 130 acres. Depots, factories or offices have recently been built, or are building for General Motors Limited (6 acres); Cadbury Bros. and J. S. Fry Limited; G. C. Hibbert & Co. Ltd. and H. J. Heinz Co. Ltd. The two specimen light factory buildings recently erected on the estate by the company have been let, one to H.M. Office of Works, and the second to the Firestone Tyre & Rubber Co. Ltd. for use as a distribution depot for their products. The inauguration of Imperial Airways Empire flying boat services in 1937 has caused increasing use of the facilities afforded by the docks, and both passenger and mail traffics carried by the air liners have substantially advanced in the past year.

#### New Vessels

As regards our Isle of Wight services, the slight reduction of 27,000 passengers carried between Portsmouth and Ryde (we carried 2,524,627 in 1938) was due to the special increase caused by the Coronation Naval Review traffic in 1937. Between Lymington and Yarmouth we carried 7,147 more passengers. The new ferry boat, the *Lymington*, was placed in service between Lymington and Yarmouth. She is built



to a design which has been very successful on Lake Constance with Voith-Schneider vertical propellers; these make her extremely easy to manoeuvre, for she can travel sideways like a crab, and waltz round in small circles. Unfortunately the floating debris in the Solent is far greater than on Lake Constance, and her propellers have sometimes met with damage from submerged objects. We have naturally had some teething troubles, but to employ a ship of such modern design and ease of handling is, I think you will agree, another example of Southern Railway enterprise. We have decided to order a new cross-Channel vessel to replace the *Maid of Orleans*, which was built in 1918. She is to be built by Wm. Denny & Bros., of Dumbarton, and will, I hope, bring added comfort and facilities to our passengers.

#### Expenditure Less than Expected

Now let me turn to expenditure. The total increase in working expenditure is £464,000, a figure which, owing to the great care exercised by our officers, is rather less than we anticipated earlier in the year. The chief items were increased salaries and wages and the heavier cost of materials. Increases appear under many heads. Maintenance of way and works increased by £61,000; of this the restoration of the cut to wages and the cost-of-living bonuses amounted to £52,000. Signalling work and cable renewals cost £11,000. Snowstorms cost us £5,000 more than in the previous year, but landslips, that bane of the railway engineer, cost us £21,000 less. Those who travel and criticise railway working do not realise to what extent railway expenditure can be increased by bad weather conditions. A day's fog in the London area, besides its inconvenience to our passengers, can cost us thousands of pounds; our colour-light signalling, however, is far more visible than the old semaphore type, and thus relieves us of some of the fog signalling expenses. At the same time it enables faster running to be maintained.

The next item, maintenance of rolling stock expenses, is up by £46,000 owing to the higher cost of materials and to the granting of the week's holiday with pay. Locomotive running expenses are up by £217,000, of which the increase in steam as opposed to electric running is £6,000. Steam running, you say, has a largely decreased mileage, why then, this increase in costs? It is due to the fact that though the personnel is smaller, the wages are higher for each individual, and the coal saved is countered by the increased cost of coal. Steam train-miles run were  $2\frac{1}{4}$  million less, and electric train-mileage  $4\frac{1}{4}$  million more at an extra cost of £211,000.

It must be remembered that in the 1937 accounts Portsmouth No. 1, which was opened in July, 1937, showed only six months' working as against twelve months in 1938, and that last year had a new item in the six months' working of Portsmouth No. 2. Of this increased cost of £211,000 for electric working, electric current, though slightly fewer units were used per car-mile, cost £162,000 more, and motor-men's wages £47,500 more, due to increased staff and the restoration of wages.

#### Working Economies

Traffic expenses are up by £165,000, of which £137,000 is accounted for by the restoration of wages, Sunday pay, and overtime. To show the care with which every item of expenditure is watched, I draw your attention to a reduction in the total of station wages paid of £25,000, and a reduction in cartage expenses of nearly £20,000. These have been attained only by rigid economies in working. By adjusting goods services to falling traffics a saving of 175,000 freight train-miles and 288,000 shunting- and light-miles has been made. Workmen's compensation is up by £6,500, and rates and rate relief, owing to increased poundage, has risen by £9,000.

Our expenditure on other businesses also shows increases. Steamboat expenses are up by £14,000, owing chiefly to larger traffic with St. Malo and the Channel Islands. On the other hand, thanks to the care of our Docks Manager, Mr. Biddle, and his staff, our expenditure on Southampton Docks is down by £30,000, no less than £22,000 having been saved on operating expenses. Other dock expenditure is up by £8,000, of which Folkestone is responsible for £3,500.

To the increase of £464,000 which I mentioned must be added £7,000 for superannuation fund interest, £2,000 for our rents, and £2,000 for rents of leased and worked undertakings. It will interest you to know that no less than £480,000 of the increase in our total expenditure is due to wages and coal, an increase greater than the whole of the increase in our working expenditure.

Our rents on account of hotels, houses, and lands under the care of our Estate Agent, Mr. Endicott, are up by £5,000, but our other rents are down by £17,000 owing mainly to reduced business in the refreshment rooms and dining cars, and general interest is down by £10,000.

To sum up, the net result of the year's working is that including £226,804 carried down from last year we have available for dividends on the ordinary stocks £1,474,263, a sum less by £604,000 than we had 12 months ago. To pay the full dividend of 5 per cent. proposed on the preferred ordinary stock will take £1,379,330, leaving a carry forward of £94,933. Our carry forward is thus reduced by £131,871, which in all the circumstances we think is justified, and we hope you will agree.

I hope the account that I have given you of the results of the working of the Southern Railway in a year fraught with difficulties will meet with your approval. Without the whole-hearted support of all our officers and staff it would have been impossible to have achieved as much. We have, as I have said before, a splendid team, all working together to secure traffics for your railway, and to move those traffics, goods and passenger alike, with comfort and despatch.

#### Southern Sales League

In my speech last year I mentioned the Southern Sales League which was initiated by our able Traffic Manager, Mr. E. J. Missenden. It was formed to encourage the staff to secure by their personal initiative increased passenger and goods revenue for the company. The figures of the working at every station for several years past were carefully examined, and, somewhat on the lines of "bogey" at golf, figures of prospective revenue were arrived at, to which with care and individual effort each station might attain. Every station then received a card showing the prospective figures and last year's figures month by month, with spaces in which to insert the figures attained.

The stations in proportion to the volume of traffic dealt with were formed into leagues and silver cups and shields have been presented to each league with certain cash prizes added. These shields and prizes were given to the winners last Monday at Victoria. The scheme has been a great success and should do even better in years to come when the handicapping is better understood, and it is realised that fortuitous increases, such as unforeseen movements of troops owing to war scares, are properly taken into account. I would like to give you some outstanding examples of individual and team work by our men.

#### Examples of Staff Enterprise

A porter attached to a suburban station has throughout the year maintained constant contact with business houses, clubs, schools, hospitals, ambulance and borough authorities, obtained permission to display the company's notices and bills regarding travel facilities, and has been successful in securing business to the value of approximately £243.

Two clerks attached to a seaside station, working together, successfully canvassed a number of local firms and secured, after many calls, consignments of timber, potatoes, sanitary tubes, drain pipes, and a household removal. Receipts to the company approximately £406.

A clerk at a country station, who happened to be the Chairman of a Sunday schools' outing committee, has, in his own time, performed all the canvassing and organising in connection with the conveyance of a large party by rail. The work has been done against competitive fares by road, and the value to the company was £175.

A motor driver attached to a London goods depot, by being alive to the possibilities even of securing traffic outside the control of his own department, was instrumental in two large parties of passengers travelling by rail and another

party using the services of one of our associated road companies. Revenue of approximately £210 was obtained.

From these you will recognise how much is due to our own staff. Almost every station has reduced its handicap, and we are proud to have amongst our stations several who are "scratch" or even "plus" players. Without this special effort from our own staff there can be little doubt that our results for the year would not have been so good.

But we should like to have more support from our stockholders. Surely some of our stockholders can put traffic in our way and add to their dividends and enable me a year hence to give instances of railway traffics secured by stockholders for their own undertaking.

### The Rush-Hour Problem

There are now one or two things that I wish to bring to your notice. We are all out to make travelling as pleasant as possible for our patrons, but modern practices add to our difficulties. Till a few years ago our passenger traffics were more or less spread; workmen employed in factories were the first to move to their work; then followed the clerks to their offices, then the higher office managers at a slightly later hour. But today, all these approximate more and more in the hours of starting and leaving work, causing us to receive many complaints of the tremendous overcrowding of the trains at the peak hours. We know only too well of the discomforts of those peak hours, but to obviate them is very difficult.

The rapid increase in the number of passengers carried during the peak hours has caused us to add to the length of our trains. This has necessitated a corresponding lengthening of platforms; in 1900 they were about 400 ft., by 1928 they were 600 ft., and now we have to provide platforms of 700-800 ft. Longer trains, by reducing the number of standing passengers, add to their comfort. For certain new suburban stock we have found it possible by the greater use of steel and of welding instead of riveting to add a few inches to the width of our third class coaches and to gain a few more inches by making the sides of the coaches a true curve. To put these new coaches in use we have had to make certain alterations to the track to admit of greater clearance. In this way, six instead of five people can, we hope, be comfortably accommodated on each side. In a recent visit to our works at Eastleigh, I and five other good-sized men sat in a trial coach and found it very comfortable. Peak hours present many problems all of which we are tackling with a will and we ask for your patience and sympathy.

### "Staggered" Hours

During each twenty-four hours of the six working days the Southern terminal stations in London are entered by no less than 2,545 trains containing 371,000 passengers. But in the three hours, 7.0 a.m. to 10.0 a.m., 540 trains come in with 243,000 passengers, nearly two-thirds of the total for the day. If the traffic during these three hours alone were more evenly spread out there would be 148 spare seats in every train. At night the exodus is carried in similar conditions.

Since the war it has become customary in both offices and works for the junior staff to assemble later and the senior grades earlier in the day than before. Can anything be done to remedy this congestion morning and night? The staggering of office hours has been suggested. We are experimenting in this ourselves, and we get our Audit Accountant and his staff of 400 up at a very early hour. If the experiment is a success we shall see if this cannot be done in other departments, and we hope that others outside will follow our example.

### The "Watered Capital" Allegation

Railways are alleged by their detractors to have large blocks of their capital represented by water, that is to say, by assets to which no value can today be attached because excessive prices were originally paid for them by the projectors of the railway. Even if this had been the case originally, such expenditure has long since been written off; for many years all works, land, coaching stock, locomotives, and steamers have been consistently written down so that

even in the most favourable market to make up and equip any of the four main British railways as they exist today would necessitate raising far larger sums of capital than now stand in the capital accounts of any one of them. Undoubtedly much of the capital paid for by the original investment, though added to at the shareholders' own expense by monies earned by the railway and used for writing down purposes, does not bring anything in to the shareholder who today represents the original investor by purchase or by succession.

Why is this? It is because the archaic controls, that bygone Parliaments in days when railways had the monopoly of transport, have imposed on the railways in relation to the rates and conditions which govern their merchandise traffic, paralysed them in their endeavour to compete with other forms of transport which are uncontrolled in the matter of charges. The railway companies are, therefore, now asking the British public to support them in a "square deal"—a square deal that will free them from their out-of-date shackles and enable them to give a yet more efficient service to that public. We who are entrusted with the direction of your undertaking are fighting this battle, not for our shareholders only, but for far more than that—to preserve for the use of the country the railways created by the savings of the public themselves, which have done so much in the past for the trade of the country and which will be vital in the event of war.

### No Rate-Cutting War

The railways are there today ready and able to deal with that trade if the antiquated and effete conditions under which they work are brought up to modern requirements. This does not mean, as the carrying trades recognise, that a rate war will be waged. The agreements arrived at with the road hauliers preclude this. There is room for both, but each must carry the goods appropriate to it, at rates that are remunerative for the services provided.

I am glad to tell you that agreements have been reached with the road hauliers, and with the iron and steel and other industries, and I hope that when the matter is brought before Parliament most of the interests involved will already have reached agreement. If this is so, it will certainly be to the advantage, not only of the transport industry but of the traders and the country at large.

The railways of this country are almost unique among the world's railways in not having cost the taxpayer a farthing. Our square deal campaign is designed to save the railways from becoming a burden on the community which they surely would be if they were allowed to get into such a low financial condition as to require State assistance to enable them to continue to function efficiently.

Last year I told you that we had purchased the option of an aerodrome site at Lullingstone, Kent, which seemed to be better suited for an airport for London than any other in existence. It was at the top, not at the bottom of a hill; it was out of the fog area and not in a cold fog-making river valley; it met with the approval of some of the greatest air experts. But we never intended to run it as an airport ourselves, and despite our warning that our option would expire on December 31 last and our readiness to take it up and pass it on without profit on an assurance that others would develop it, neither the State nor the city nor any county authority showed any interest in the matter. So the option expired.

One more air matter. We and the Great Western Railway Company came to an arrangement with the Cunliffe-Owen/Olley interests to eliminate competition between them and Railway Air Services Limited for the air traffic in the territory of our two railways, and a new company was formed known as Great Western & Southern Air Lines Limited. In future this new company will be responsible for the air services in our own and the Great Western territories and certain parts of the Continent (but excluding the Channel Islands, which are served by Channel Islands Airways Limited, in which we already have an interest).

### Waterloo & City Improvements

Last year I told you of the severe but justified criticisms which were made on our Waterloo & City Railway. We

are now well on the way to carrying out our promises of reform. We have ordered a complete new set of rolling stock which will greatly augment the accommodation existing today and will add to the comfort, not only to seating, but in quietness of working. This should be ready by the end of the year. The last improvement, that of making three escalators at the Bank station instead of two, requires Parliamentary sanction. If and when this is obtained, though from its early construction this tube railway can never be equal to the Southern above-ground standard, it will be greatly improved, and at the Bank station what with the escalators and an interchange at low level with the Central and City railways, the public will acquire improved travel to the west end and *via* Liverpool Street to the north. Those who use the Waterloo & City Railway have been very patient in the past and I ask them to show restraint for just a little longer when I am sure they will be pleased with the results obtained.

#### Railway Executive Committee

I cannot end my speech without a reference to the crisis of last September. About the middle of that month the old Railway Executive Committee of war days was re-formed. It consists as before of the general managers of the main-line companies, now four instead of fourteen (to which has been added a representative of the L.P.T.B.) whose duty it would be to carry out during a war all railway operations on behalf of the Government. Arrangements were made through this committee for the evacuation of school children and sick persons. The more urgent schemes for dimming lights at marshalling yards, in carriages and offices, and for the protection of the staff working the line were put in force, and had war come the railways would have been found ready with an effective scheme. Thanks to the great efforts made by Mr. Chamberlain, war did not come, and the nearness of it only added to the efficiency gained by the experience. Arrangements have been or are being made for the protection from air attack of your line and its personnel.

Let us hope that by this time next year Britain's preparedness will finally avert all danger of a war with nations with whom we wish to resume our old terms of friendship, and amongst whose nationals each one of us has many a friend.

If this is so and peace becomes secure, undoubtedly trade and intercourse between the nations will once more return to their old channels and help to bring prosperity to our great undertaking, to the advantage of its shareholders and to all who work for it. To these last I wish to pay the highest tribute. Year in, year out—in storm, in fine weather—each and all, from the General Manager to the last joined porter and office boy, work with hand and brain for the success of the Southern and are to a man determined to keep it the most progressive line, not in England only, but in the world.

I therefore move the following resolution: "That the report of the directors and statement of accounts for the year 1938 be and the same are hereby received and adopted."

The Deputy Chairman, Mr. Eric Gore-Browne, seconded the resolution.

#### Shareholders' Remarks

Mr. Theodore Instone congratulated the Chairman on his speech and complimented the board of directors on the excellent results. He expressed pleasure at seeing Sir Herbert Walker at the meeting as a Director for the first time. He was sure stockholders were grateful for what had been done for them by the officers and staff of the company, and suggested they should now do something for themselves by sending a telegram to the Prime Minister appealing for a short Act of Parliament to release the railways, before it was too late, from the shackles and restrictions that now bound them.

Mr. Charles Taylor suggested the provision by the railway of a liaison officer, to explain to travellers the reason for the delays to traffic that were occasionally inevitable. He concluded by wishing Mr. Charles Sheath happiness in his retirement.

Mr. Mason proposed the reduction in number of the directors by half, and the appointment of one General Manager

and eleven assistant managers. On such lines he could make the company pay easily. Closer touch between directors and railwaymen would bring a new era of prosperity to the railways.

Mr. Norman Hulbert enquired as to the prospects of electrification in the East of Kent and the electric haulage of boat trains; the improvement of Customs facilities at Dover and Folkestone; and the date when the Bank—Waterloo extension would be in working order.

Mr. Sutton complained of passengers taking cheap third class tickets to the coast being obliged to stand in the corridors.

Mr. Milnes proposed that if the railways did not get a "square deal," they should tear up the existing schedules of rates and defy Parliament.

Mr. Wiltshire proposed the issue of tickets enabling passengers to travel third class to town and return first class.

Mr. Proctor asked why the company did not do its own catering in the restaurant cars.

Mr. Ernest Short, representing the British Railway Stockholders' Union, asked the Chairman if he could state the terms on which shareholders would be compensated were the railways to be taken over by the Government in war. He hoped the directors would bear in mind the stockholders' demand that the standard revenue should be recognised.

Mr. Chalmers Hunt asked that facilities should be given at every railway station for members of the public to sign a petition to Parliament for the rectification or supplementing of the Railways Act of 1921.

Mr. Briggs referred to the Chairman's suggestion that stockholders should help the railway company, and asked to what quarter ideas for this purpose should be addressed.

Mrs. Bunney enquired whether it was possible to do anything in the direction of making employees co-partners in the railway company.

#### Chairman's Reply

The Chairman: My lords, ladies, and gentlemen, perhaps I may now answer the various questions which have been asked, and the remarks which have been made. I am very grateful to the various speakers for thanking the management and the directors for the way in which the line has been run during the past year. I thank Mr. Instone for his idea of sending a telegram, which seemed to receive a great deal of support in this room. In those circumstances, I propose that that telegram should be sent as from the shareholders.

Then Mr. Taylor suggested that there should be a liaison officer available to give information at stations about any mishap which may happen on the line. We are already looking into that, and we will make any information known as soon as possible. We have also, as you know, at several of our stations, loudspeakers through which information of that kind can be disseminated. But one little cause which is rather a hindrance on any line, particularly on our own, to the information getting about as soon as possible, is that everyone is proud of the line, and all the officers and men at the stations particularly, because they cannot think that the delay is going to be long, therefore they try to minimise it as much as possible. We are trying to get the information through as soon as possible.

Mr. Mason gave us a great deal of criticism, and asked if he might come and see me at Waterloo. If he will write to me and make an appointment I shall be only too glad to see him, and I hope that when he goes away from me he will go away in the same spirit as he is going away from this meeting, namely, a little more hopeful. He spoke about the very large number of directors and their large number of directorates. But that does not apply to this line. He referred to the total number of directorates held by our directors, and they included a great many railways and allied undertakings. But I would stress what another shareholder has already stressed, and that is that the holding of those directorates—and they concern many large companies—means that the men concerned are men of experience and men getting a lot of traffic for our line.

Mr. Norman Hulbert was kind enough to congratulate us, and he also put his finger on two points which we are trying to make much better. The first point is the facilities at



Dover and Folkestone. At Dover we are spending £27,000 to make that station more comfortable, and at Folkestone we are spending £41,000 to make it much more comfortable and convenient for passengers arriving there. It is a very complicated matter in the case of Folkestone, because the area on which we can work has the sea on both sides, and it is not too wide, so that makes it difficult. But when the new alterations are made, I think that the passengers who travel through those ports will find a great deal more comfort. We hope to finish that work by Christmas of this year. He also asked when the Waterloo & City Railway work would be finished. We hope that that will be finished by Christmas of this year. But that will not allow for all the escalators being finished, because we have not got our Bill through Parliament yet, and that will take a little longer. However, we hope to have a considerable improvement in the running of the trains this year, and to improve the noiselessness and the capacity by that time.

Mr. Milnes asked us not to spend any more money, but to give him a dividend. I can assure you that when we spend any money we think very seriously about it, and we only spend it because in our opinion it is going to bring in more than enough to pay the interest which we have to pay on the money, and that it will be for the benefit of the shareholders, including the deferred shareholders.

Then Mr. Chalmers Hunt wanted a petition signed with regard to the "square deal." It was not initiated by us, because we are a passenger line; but we are supporting it wholeheartedly. But Mr. Chalmers Hunt's idea of a petition with regard to the "square deal" is being considered by the four general managers, and I think something may be done in that way.

Mr. Briggs asked where his ideas could be sent to. If he will write to Major Dawes, our Secretary, at Waterloo, his enquiry will receive every possible attention. Mr. Milnes asked us to defy Parliament, but I am afraid—and I am sure you will agree with me—that it is no good going to work in that way, because we are not getting any further.

With regard to the catering and refreshment cars, our reason for doing as we do is that we derive a very fair revenue from them, and do not have an undue number of complaints with regard to them. We will look into the complaints which have been made, and see what we can do about it. We would be glad if the shareholder would write and tell us the dates, and the places where he was travelling, when he had to make the complaints.

One of the speakers said that the directors had a stand at Tattenham Corner, and that the expenses came from the railway. The expenses of the directors and their friends come from the directors' own funds.

With regard to the lady speaker who addressed us, all I can say is that we hope we shall be able in future days to return a dividend on the deferred shares.

With regard to the Stockholders' Union, they asked what terms have been arranged as a compensation from the Government if the railways are taken over in time of war. No definite decision has yet been come to; but the matter has been very carefully inquired into, and you may be satisfied that when the occasion, which I hope will not arise, does arise, that satisfactory terms will have been arranged.

I will now ask you to vote on the following resolution: "That the report of the directors and statement of accounts for the year 1938 be and the same are hereby received and adopted."

The resolution was put and declared carried.

The Chairman: The next business is the declaration of dividends, and I will ask the Secretary to read the resolution.

The Secretary (Major L. F. S. Dawes): "That the following dividends be and the same are hereby declared: for the half-year to December 31, 1938: 2½ per cent. on the 5 per cent. guaranteed preference stock; 2½ per cent. on the 5 per cent. redeemable guaranteed preference stock (1957); 2½ per cent. on the 5 per cent. preference stock; 2½ per cent. on the 5 per cent. redeemable preference stock (1964) (making in each case, with the interim dividends, 5 per cent. for the whole year); 4 per cent. on the preferred ordinary stock (making, with the interim dividend of 1 per cent., 5 per cent. for the whole year). And that such

dividends be payable (subject to income tax) on March 2, 1939."

The Chairman: I beg to move that resolution.

The Deputy Chairman: I beg to second that.

The resolution was put and declared carried.

The Chairman: The next business relates to the retiring directors. There are five directors who retire at this meeting, namely, Mr. Gore-Browne, Mr. Corry, Sir George Courthope, Lord Radnor, and Mr. Sheath. As stated in the report, all are eligible and offer themselves for re-election, with the exception of our old friend Mr. Sheath, who does not seek re-election. Lord Kennet, who, as Sir Edward Hilton Young, was a former Director of the company and resigned in 1931 on being appointed Minister of Health, is a candidate for the vacancy and the directors recommend his election. I therefore beg to move: "That the following directors who retired by rotation at this meeting, namely Mr. Eric Gore-Browne, Mr. Herbert William Corry, the Right Hon. Sir George Loyd Courthope, Bart., M.P., and the Right Hon. the Earl of Radnor, be and they are hereby elected directors of the company."

The Right Hon. Lord Rockley (Director) seconded, and the resolution was carried.

The Chairman: We have to have a further resolution in connection with the filling of the vacancy on the board of directors caused by the retirement of Mr. Sheath, and I therefore move: "That the Right Hon. Lord Kennet, P.C., G.B.E., be and he is hereby elected a Director of the company in place of Mr. Charles Sheath, retired."

The Deputy Chairman seconded the resolution, which was declared carried.

The Chairman: The next business relates to the auditors. The auditor who retires at this meeting is Sir Nicholas Waterhouse, and, being eligible, he offers himself for re-election. Sir Nicholas Waterhouse, I would remind you, who was elected an auditor last year in the place of the late Sir Albert Wyon, is seeking re-election on this occasion in order that in future one auditor may come up for re-election each year, Sir Harry Peat also having been re-elected at the last annual meeting. I will ask one of the proprietors to propose the necessary resolution, and another to second it.

Mr. M. A. Edwards moved: "That Sir Nicholas Edwin Waterhouse, K.B.E., F.C.A., be and he is hereby elected an auditor of the company."

Mr. W. Bishop seconded, and the resolution was carried.

#### SPECIAL GENERAL (WHARNCLIFFE) MEETING

The Chairman: We are now holding the special general (Wharncliffe) meeting to consider the company's Bill in Parliament, and I call upon the Secretary to read the notice convening the meeting.

The Secretary read the notice.

The Chairman: The principal objects of this Bill, as explained in the circular which has been sent to each proprietor, are to obtain powers to alter the levels of a part of the authorised Motpur Park to Leatherhead railway and to make subways and other works at the City station (Waterloo & City Railway)—that is what I referred to about the escalators—and a low level connection with the Central London Line. I will ask the Secretary to read the resolution.

The Secretary: "That this meeting having considered the Bill intended to be presented to Parliament, intituled, 'A Bill to empower the Southern Railway Company to construct works and to acquire lands; to extend the time for completion of a railway and the compulsory purchase of certain lands; to confer further powers on the company; and for other purposes,' approves thereof subject to such additions, alterations and variations as Parliament may think fit to make therein."

The Chairman moved the resolution, which was seconded by the Deputy Chairman, and declared carried.

The Chairman: My lords, ladies, and gentlemen, that is all the business for today.

Mr. Mason moved a vote of thanks to the Chairman, directors, and staff of the company.

Mr. Wiltshire seconded the proposition, which was put and declared carried unanimously.

The Chairman briefly acknowledged the vote of thanks, after which the proceedings concluded.

## LONDON MIDLAND & SCOTTISH RAILWAY COMPANY

*Passenger receipts improve—Locomotive efficiency—Success of Wirral electrification—Varied activities of Research Department—T.P.O. and L. & B. centenaries—Honours for L.M.S.R. officers—Hudd A.T.C. installation—7,700 track-circuits*

The annual general meeting of the London Midland & Scottish Railway Company was held at Friends House, Euston Road, London, N.W.1, on February 24, the Rt. Hon. Lord Stamp, G.C.B., G.B.E., Chairman of the company, presiding.

The Secretary (Mr. Owen Glynne Roberts, C.B.E.) read the notice convening the meeting.

The Chairman: Ladies and gentlemen, I now lay on the table the report and accounts for the past year, and as they have been in your hands for some days, I presume you will as usual take them as read. The company has suffered a severe loss since our last meeting, for it is my sad duty to report the death by accident on December 9 last of our colleague, Mr. Charles Booth, of Liverpool, whose family has been associated with Liverpool and Warrington for over 300 years. His great-uncle, Henry Booth, was the first Secretary of the Liverpool & Manchester Railway, the inventor of the screw coupling, and shared with Stephenson the prize for the *Rocket*. Charles Booth himself, who was at one time Chairman of the old Midland Railway, joined that company's board in 1898 and was an original Director of this company. He was a man of broad sympathies and great kindness, and it was said of him, in his relationships with labour as Chairman of the Employers' Association of the Port of Liverpool and a member of the Docks & Harbour Board, that he had taught all classes to trust to his sense of justice and to count on his sympathetic understanding. He had sound judgment and great business experience, and will be difficult to replace.

We shall also suffer a great loss by the retirement of our dear friend Sir Thomas Williams, whom nature seems to have endowed with perennial youth. He was first employed by the Monmouthshire Railway and by the Great Western, and then his services were acquired by the London & North Western Railway as part of the "working stock" of the Sirhowy Railway when they absorbed it in 1876. It was one of the best bargains they ever made. We have been more than fortunate in having had for so long the benefit of his great experience, his constant energy and his chairmanship of the Birmingham Canal. He is a standing refutation of the theorists who set a fixed age for retirement as the limit of directorial usefulness.

I ought to refer to a face we shall never see at these meetings again, for Mr. Eric Charles McAdam died in August last. He was a stern critic of the administration, but the interest he took in all phases of the company's affairs and the sincerity of his convictions will always be a pleasant memory.

We have strengthened our position in Scotland by the appointment to the Scottish Committee of Mr. Murray Stephen, the Chairman of Alexander Stephen & Sons, Shipbuilders, of Linthouse, who is the sixth Stephen in direct succession as head of that firm.

### Changes in Administrative Personnel

During the year Mr. C. R. Byrom retired from the position of Chief Operating Manager and we hope he may be spared many years to enjoy his well-earned rest. He has been succeeded by Mr. T. W. Royle, an officer of vigour and great experience.

When we lent the services of Mr. E. J. H. Lemon to the Government for a time as Director-General of Aircraft Production, Mr. Ashton Davies (our Chief Commercial Manager) was appointed Acting Vice-President, and Mr. T. E. Argile Acting Chief Commercial Manager. You will, I know, be sorry to hear that Mr. Ashton Davies has been seriously ill, but he has made a good recovery and is resuming his important work next month.

Mr. J. H. Follows, who retired from the position of Vice-President in March, 1932, continued up to the date of his death to serve the company faithfully as a representative on the boards of several companies in which we are interested. He was a man of outstanding personality and the company is the poorer by his death.

### Railway Traffic Receipts

At our last meeting I pointed out that for the fourth successive year our railway traffic receipts had increased and that for the first eight weeks of 1938 we had improved on 1937 by £317,000, and the general prospect over our system was that trade would be just about the same level in 1938 as in 1937. By the end of the seventeenth week, however, the increase had been wiped out and for the remainder of the year there was a serious decline, resulting in a final decrease of railway traffic receipts amounting to £3,005,000—a decline which has continued so far in 1939 at the average rate of £78,000 per week. The reasons for the decline are well known to you—a sharp recession in trade since March, which was accentuated by the international situation, and a further diversion of certain classes of merchandise traffic to other forms of transport coupled with reductions of rates for vulnerable traffic retained. In addition, large stocks had been built up by various trading interests in 1937, and there was a consequent fall in traffic conveyed in 1938. I gave you last year the decreases in the various classes of railway traffic receipts in 1937 as compared with 1929, and repeating these figures in relation to those for 1938 will best indicate where we have suffered:—

		Reduction per cent. in 1929	
		In 1937	In 1938
Passengers	.. .. .	6.4	5.6
Parcels, &c.	.. .. .	4.9	6.1
Merchandise (Class 7 and upwards)	..	14.4	21.6
Merchandise (Classes 1-6)	..	4.6	20.7
Coal	.. .. .	3.8	6.1
Livestock	.. .. .	28.8	36.2
Total railway traffic receipts	..	8.2	12.4

The figures in each case reflect the increase in charges which came into force on October 1, 1937, and but for this the decline would have been even more marked.

### More Long-Distance Passengers

The one satisfactory feature is the further growth in the passenger receipts, which were considerably aided by the travel to the Glasgow Exhibition in 1938, but, on the other hand, in 1937 there was a substantial volume of special business in connection with the Coronation. While passenger numbers in 1938 declined by 5½ per cent. compared with 1937 there was a growth in long-distance traffic, with an overall increase of £165,000. The Christmas holiday week illustrates this point. You will recollect that sudden frost and snowstorms greatly interfered with the arrangements of the public in that week. There was a severe reduction in the numbers of short-distance passengers who would normally have travelled to football matches which were cancelled, or for various recreational purposes. On the other hand, there was an abnormal number of passengers for that time of the year on the long-distance trains because of the difficulty of road conditions. There were natural difficulties in effecting the change in our working arrangements, with snow and ice impediments, but they were well overcome, and although we received some complaints of delays, there were even more thanks from passengers who appreciated the manner in which the weather conditions were de-

feated by the really excellent work of our staff as a whole, to whom I sent a special message of thanks.

### Loss of Merchandise Traffic

The merchandise results are the most serious and it is the cumulative effect of our losses here which has led us to make representations to the Government, to which I will return later. Although the major cause of the decline in 1938 in the merchandise receipts, in Classes 1 to 6, is the condition of the heavy industries, there have been losses of certain traffics to road conveyance. The latter difficulty is more marked in Classes 7 to 21, which in the upper ranges are less affected by trade conditions as a whole. Here we have seen distinct losses of both old and new types of traffic, some of them due to pressure on traders (to whom I have referred before) who recognise that the classified rate system required by Parliament imposes higher rates in terms of weight on the higher classified traffics and do not wish to disturb this balanced system. They have, however, now been instructed by certain ultimate consignees to obtain tenders for road conveyance on a weight basis, and although both they and their consignees know the ultimate result, they must follow their instructions. The result is a loss of present rail-borne traffic and a lowering of railway rates to retain similar future traffic to the railways with further damage to the Parliamentary scale of rates, which are not based on weight considerations alone.

### Expenditure

The losses of traffic receipts are, for the reasons I have stated, almost entirely due to causes outside our control. When, however, we turn to the expenditure side of the accounts we get into a field where the amount controllable is substantial. We cannot control prices of materials and rates of wages, although we do our best to see that they are reasonable, and in certain cases we can resort to alternatives, where efficiency and safety are not affected.

I have told you on various occasions the many steps we have taken to effect economies and of the budget system we have in force to ration expenditure. When, in 1932, I explained the rearrangement of our budgeting plans, I pointed out that a good deal of time and experience must elapse before they would yield all their logical implications and give their most productive results. Clearly, the most difficult part is the forecasting of the probable receipts, or sales of transport, and last year our first forecasts were far from the mark because they were based upon the equally wrong forecasts by the different industries of their respective prospects. I told you a year ago broadly what they were, and was more amused than annoyed when last September, in the midst of the unprecedented difficulties then, two or three stockholders wrote me pointing out our error. Stockholders, moreover, often get confused between ordinary revenue expenditure and expenditure on capital works which they think ought to be curtailed but which really does not affect the year's results in any way.

### The Watch on Expenditure

We, in fact, modify our forecasts as circumstances change, and naturally did so more than once during the year. These revenue forecasts influence our expenditure forecasts, which have been greatly developed and extended in recent years, and were of the utmost value last year. While certain controllable outlay must by its nature be settled well in advance and cannot quickly be altered without disturbance to our customers—train schedules are an illustration—other outlay can be modified. Week by week throughout the year the matter was closely watched and we cut our coat according to our cloth, each department and each part of it working very closely to plan, with the results I have mentioned.

Maintenance expenditure was reduced by £77,000 and without curtailment of any essential work. Less renewal work was performed, but that does not affect the charges to the year's expenditure as the annual provisions are independent of the work done in any one year. These provisions as a whole were practically the same in 1938 as in 1937, reductions due to standardisation of stock being balanced by the effects

of price changes and by a growth in the provision we make to equalise the charges for renewal of worn-out works or for writing off redundant works.

Operating expenditure increased by £63,000, which was more than accounted for by increased prices of coal and other materials, as retrenchments in numbers of staff more than off-set the higher rates of wages. An interesting figure is the coal charge for locomotive running, which was £83 less than in 1937 out of a total of £4,886,000. There are three factors in this:—

Increased cost per ton of coal used .. ..	£201,750
Decreased cost due to less mileage .. ..	£153,104
Decreased cost due to less consumption per mile .. ..	£48,729
	£201,833
Net decrease .. ..	£83

Even these three parts cover variations in types of coal, mileage, and locomotives, and show the danger of considering total figures alone which have apparently the same meaning.

Three years ago I referred to our superannuation fund, and told you that we had provided for an additional actuarial liability as from 1935, and that the whole position would be reviewed later. We have now completed our examination of this and all other like liabilities, and this has resulted in a decrease in the annual charge to general charges by £204,000 per annum, and the present figure will repeat itself annually until such time as new actuarial circumstances may require a revision.

The other railway expenditure calls for no special comment, and this brings me to the net railway receipts, which at £10,856,000 are £2,780,000 less than in 1937. The total reduction is, of course, most disappointing, but it compares very favourably with the loss of £3,022,000 in railway gross receipts when it is borne in mind that the expenditure is heavily swollen by the increase in prices and wages rates, which I shall refer to again later.

### Other Net Receipts

The other businesses and interest items show the same general results as those from railway working and show a reduction over all of £231,000. The joint lines improvement of £136,000 is largely a non-recurring one, due to a special credit of £40,000 for corrections of payment for local rates which have followed the reductions on the main lines. The receipts have also been assisted by amendments of past pooling balances with the owning companies. An increase in rents of £28,000 is very satisfactory having regard to the many sales of surplus property which we have effected in recent years and which, including £464,000 in 1938, have resulted in credits to capital account since 1923 of £4,250,000—an important liberation of our capital resources for employment in other directions. The growth of £32,000 in interest on investments is mainly due to the further increase in dividends on investments in omnibus companies. The agreements we made have worked very satisfactorily and not, as some of our critics suggested, to the detriment of either our passenger receipts or public facilities. I observe that Mr. Heaton, the Chairman of Thomas Tilling Limited, at his annual meeting last week expressed his gratification at the way in which the partnership has worked, and with the friendly collaboration in the nine years since we came together. I need hardly say that we reciprocate Mr. Heaton's sentiments.

General interest was £70,000 lower, reflecting the lower takings and the depletion of floating capital funds now used in connection with new works expenditure.

### Increased Prices

I referred last year to the rise in prices of materials and rates of wages (from August, 1937) which cost us an additional £1,875,000 in revenue expenditure in 1937 and warned you that the full impact would not be felt until 1938/9. Since then portions of the heavy increases in material prices have been removed and although other prices have increased, on balance the year 1939, on present information, should not



add to our 1938 prices for purchases of materials, although they remain at a high level.

There were certain further additions to wages rates which became effective in 1938 (including the cost of holidays with pay to artisan staffs) amounting to approximately £300,000 for the year. All over, prices and wages rates added in 1938 a further £1,400,000 to our revenue expenditure.

Our railway and ancillary businesses expenditure together decreased by £340,000 despite the all-over increase of £1,400,000 in prices and wages rates to which I have just referred, so that the savings due to reduced volume of business and further fructification of economies amount to no less than £1,740,000, or a reduction of nearly 3 per cent. Including the effect of this large economy the net revenue is £11,346,000, or 2.6 per cent. of the capital receipts—a very low return, resulting in no dividend on either the 1923 preference stock or the ordinary stock. I have told you what we have accomplished in effecting reductions in the controllable expenditure, and although the pace now may be slower, we have not reached finality in this direction.

These reductions are, of course, a result of the policy I have explained to you at some length in previous years. Going back to 1929, as I have done in other comparisons, I find that the effect of higher prices of labour and materials, on 1938 output, cost us £2,300,000 more, but even so expenditure decreased by £4,200,000, making a reduction of controllable expenditure of £6,500,000 compared with nine years ago. Of this, approximately £2,250,000 is the natural effect of lesser traffic and £4,250,000 is economy in the strictest sense, due in part, it should be remembered, to the new works schemes I have described to you.

#### Emergency Arrangements

Various preparatory arrangements have been made to meet the Government requirements in the event of a national emergency, including preparations to meet air attacks. You will appreciate why I cannot explain these or even refer to the financial aspect of them as it affects you, beyond stating that your interests are being carefully protected by your board.

#### Increase of London Area Fares

It will be recollected that the general increase of railway charges by 5 per cent. under the Railways Act, 1921, which came into force on October 1, 1937, did not apply to intra-London railway passenger fares. All such fares are pooled with those of the London Passenger Transport Board under the London Passenger Transport Act, 1933, and application has now been made to the Railway Rates Tribunal to authorise a 5 per cent. increase in such fares, and the board on its part is making corresponding arrangements in regard to their fares. I should add that the London passenger pool is working smoothly despite the huge problems involved, and the higher prices in recent years, which have restricted the capacity of the five parties to meet the present requirements of the public and to develop and improve their facilities.

#### Transport in Northern Ireland

Since we met a year ago the position of public transport in Northern Ireland has become one of extreme difficulty. The Northern Ireland Government appointed the Recorder of Belfast to inquire into the question of charges and facilities, and this was followed by an inquiry into financial and organisation matters of a more technical nature by a further committee appointed by the Government consisting of Sir William M'Lintock, Sir Herbert Walker, and Mr. J. S. Nicholl. The reports of these committees were published in November last and the latter recommended the creation of a new Rail and Road Transport Board which would acquire the undertakings of the existing Road Transport Board, the Belfast & County Down Railway, and the portion of the L.M.S. Railway in Northern Ireland. A Select Committee of both the Northern Ireland Houses of Parliament has been appointed to examine these reports, and at their request evidence was given before them on behalf of the company. Appropriate steps will be taken to safeguard your interests in the event of any proposed legislation affecting them adversely.

#### Electrification

It has been necessary lately to repeat in public what I have previously stated to you that outlay on electrification of railway lines to secure national values is not an outlay to be borne by the funds of the shareholders. We have on the other hand electrified lines where that was economically justified. In March electrified working was introduced for passenger trains on the section of the former Wirral Railway between Birkenhead (Park) and West Kirby, and New Brighton. The Wirral is a favourite dormitory area for Liverpool, but it was felt that we should not derive full advantage from the development until means could be found for avoiding the change at Birkenhead (Park) between the L.M.S.R. and Mersey Companies' trains. The electrification of our lines has obviated this change of trains, and has made possible the provision of through electric trains at intervals as frequent as ten minutes during the peak and fifteen minutes in the off-peak hours. Standard journey times from West Kirby have been reduced 19 per cent., and from New Brighton to Liverpool (Central) by 25 per cent. Extensive alterations to the track layout were necessary at Birkenhead Park, and other Wirral stations have been modernised. The increase of passenger traffic has been fully up to our expectations, and the whole of the joint arrangements with the Mersey Railway Company have worked very satisfactorily.

#### Operating Results

The operating results for 1938, where comparison is possible, are appreciably better than those for 1929, and although the figures of handling merchandise traffic at our stations show increases in 1938 over 1937 in hours per ton and cost per ton, these are attributable to the decline in traffic and to an increase in the number of consignments per ton. In addition, the cost per ton was influenced by enhanced wages rates in the first 7½ months of 1938 compared with 1937. Over a long period modern transport facilities have led to firms in general ordering more frequently and in smaller quantities. But fluctuations over shorter periods are indicative of business stringency and come out in the greater number of consignments per ton of goods traffic. The number of consignments per hundred tons in 1937 was 460, and in 1938, 496, an increase of 36 or 7.83 per cent. Compared with 1929 the number has increased by 106 or 27.18 per cent. To put the matter another way, if the weight per consignment had been the same in 1938 as it was in 1937 we should have handled over 7,650,000 fewer consignments; and if the weight per consignment had been the same as it was in 1929, over 22,650,000 fewer consignments would have been dealt with.

#### Punctuality Figures

For our passenger trains our punctuality performance was 4 per cent. higher in 1938 than in 1937 for the expresses, and 2 per cent. for the locals, reaching 91 per cent. for all classes. The mechanical efficiency of our locomotives continues to improve and the figures have reached levels which a few years ago would have been thought impossible. We define a casualty rather stringently, as anything which causes a delay of a few minutes, and during 1938 the number of locomotive casualties showed a decrease of nearly 14 per cent. compared with 1937, and the miles run per casualty rose from 61,113 to 68,978. Three years before it was 43,096, so that the increase in 1938 over 1935 is 25,882, or 60 per cent. This is an example of what is meant by the "fructifying" of past expenditure, but it is also due to the play of a spirit of competition in efficiency between the different motive power depots.

#### Speed Progress

I will give you three indications of the results of the policy of increasing the speeds of our trains during recent years. First, in the summer of 1931 there were no passenger runs scheduled at a booked speed of 60 m.p.h. and over; by the summer of 1935 we had 10 runs with 1,236 miles; by 1937 36 runs with 3,727; and last summer 63 such booked runs, covering 6,317 miles daily. Again, the acceleration of pas-

senger trains can be shown by the numbers affected and the total amount of acceleration. In 1931 and 1932 we had 5,100 trains altered, saving 294 hr. daily. In the three years 1936/8, 6,700 trains were altered, saving 348 hr. In the third place, for our freight trains in the past seven years we have altered 691, saving 384 hr. At the end of 1931 there were 173 fitted freight trains, i.e., trains composed wholly or partially of vehicles fitted with the automatic brake, whereas at the end of 1938 the number of such trains had risen to 339, an increase of 96 per cent., with a total daily reduction in journey time of 150 hr. 15 min.

#### Increased Engine-Mileage

A close review has been in hand to obtain accelerated point-to-point running times, where possible, for all classes of freight trains, so as to secure the best possible performance from the modern motive power stock in relation to the traffic to be moved. Improved point-to-point running times have been adopted in the timings of freight trains in the Spring, 1939, issue of working timetables. A few other indications of improvements in operating may be interesting. Our shunting per 100 train-miles is 15 per cent. less for passenger and 6 per cent. for freight trains than in 1929. Our double-heading, thanks to the increase in engine power, is 15 per cent. less for passenger and as much as 58 per cent. less for freight trains. We now get 24 per cent. more mileage a day from each engine in use.

#### Staff Matters

Reference has been made in the report of the directors to the claims recently submitted to the Railway Staff National Tribunal from the three railway trade unions. These claims cover 333,000 conciliation staff and 82,000 salaried staff, a total of 415,000, or 71 per cent. of all the railway employees of the four main-line companies. The total amount involved if the claims were conceded would be £6,750,000, of which this company's share would be £2,800,000. There would be far-reaching consequential additions to these figures if the claims were conceded. The companies contested these claims before the tribunal, both on merits and also having regard to the serious financial position of the companies, and the decision of the tribunal is expected this week. I have been asked to state the allocation of last year's receipts, and the figures are:—

	s.	d.	Per cent.
Salaries and wages .. .. .	11	1 per £ or	55.4
Coal .. .. .	1	5½ .. ..	7.2
Other material .. .. .	2	11½ .. ..	14.6
Sundry items .. .. .	1	5 .. ..	7.2
	16	10½ .. ..	84.4
Available as net revenue:—			
(a) Interest on debenture stocks .. ..	1	2¾ .. ..	6.1
(b) Dividends on guaranteed and preference stocks .. .. .	1	10¾ .. ..	9.5
	20	0 .. ..	100.0

Owing to the nature of our work, the salaries and wages bill throughout the year varies very little; the range of variation last year in our 13 accounting periods was only 3 per cent. On the other hand, the gross takings, in these four weekly periods, covered a range of 23 points. These figures illustrate the comparative rigidity of railway working expenses and its effect on earning capacity in certain periods of the year.

#### Centenaries of 1938

During 1938 two centenaries of considerable importance to the company were celebrated. In March, at the request of the Postmaster-General, we collaborated with his department in an exhibition at Euston, and later at Birmingham, to mark the achievements of the first hundred years of the travelling postal sorting office. Great public interest was displayed in the exhibits, which showed the development of the travelling post-office arrangements up to the present day and indicated the vital importance of the railway service in the handling of the Royal Mails.

Then in September the centenary of the London & Bir-

mingham Railway occurred, one hundred years having elapsed since the first through line between the two cities was opened, and the event was celebrated by an exhibition at Euston station. During the seven days it was open this exhibition was visited by nearly 30,000 people, and having regard to its great success, we agreed to a request from the Birmingham city authorities that a number of the exhibits be shown at Birmingham for a subsequent period. It was estimated that a further 25,000 people visited the exhibition at Birmingham. A centenary banquet was given by the directors in London in November, when we were honoured with the presence of H.R.H. the Duke of Gloucester and many representatives of foreign States and railways.

#### New Year Honours

In spite of the difficult times we felt that suitable recognition should be made to mark this milestone of one hundred years of railway progress, and the company received numerous expressions of goodwill from all quarters in connection with the centenary. The occasion was further marked by the inclusion in the New Year Honours of seven names from the L.M.S.R. They were:—

Mr. Glynne Roberts	Secretary of company and Assistant to President	C.B.E.
Mr. Ashton Davies	Acting Vice-President	C.V.O.
Mr. G. L. Darbyshire	Chief Officer for Labour and Establishment	O.B.E.
Mr. J. Purves	Principal Asst. to the Chief Mechanical Engineer for Carriages and Wagons	M.V.O.
Mr. J. B. Scattergood	District Goods Manager, Birmingham	M.B.E.
Mr. H. J. Dean	Dining car conductor	} Medal of the Order of the British Empire
Mr. E. E. Horney	Headquarters' Inspector	

#### Coronation Scot for U.S.A.

The British participation in the New York World's Fair is on a much more worthy scale than has been the case at international exhibitions in recent years, and our own contribution is, as I explained last year, to send our latest train, the Coronation Scot, and the completion of the contracts with the fair authorities last summer created the greatest interest. The train has now crossed the Atlantic and will shortly set out on its tour of 3,121 miles prior to taking its place at the World's Fair which opens on April 30. The American railroads have co-operated enthusiastically, and indeed it is difficult to meet all their requests, while the fair authorities are using the tour of the train as an important means of extending their own publicity. The popular interest is already so great that the visit bids fair to exceed the success of the Royal Scot visit six years ago, and be an equal stimulus to technical knowledge in addition to creating further interest in the tourist traffic to this country, as a counter to the fierce subsidised competition by the various Governments of the Continent.

#### Staff Educational Films

I have mentioned on previous occasions the use we are making of mobile film theatres by which L.M.S.R. instructional films are shown to our widely scattered staff. During 1938 further films have dealt with such important subjects as accident prevention, engine shed working, and salesmanship, bringing out the correct methods to be adopted in dealing with everyday problems in contrast with the results of wrong methods. To stimulate interest the staff is invited to contribute observations upon the films to their staff journals, and the gratifying response indicates how much discussion and thought is provoked.

#### Catering Results

In the latter part of 1938 the hotels did less business, like all similar concerns, partly due, no doubt, during the holiday months to a fall in the franc just prior to the holidays, but principally to the general political unsettlement. Refreshment rooms and dining cars also showed minor decreases in receipts following, of course, the trend of passenger travel. Our new hotel at Leeds has now had a full year's working, and although for the reasons already men-

tioned the business done did not fully realise anticipations, we are satisfied in the circumstances that the hotel is satisfactorily serving the purpose for which it was constructed. This is one of the first hotels to be built in this country with a complete system of artificial ventilation, and it has proved fully satisfactory from the visitors' point of view.

The modernisation of the ground floor of the Caledonian Hotel, Edinburgh, is now complete, and has met with general appreciation in Scotland.

#### A.T.C. Experiments

For some years we have been examining closely the general modern problem, made more acute by the necessary intensification of certain suburban services, of further protecting our trains during exceptional weather conditions of fog and snow. After reviewing the various methods and relative costs of overcoming the difficulty, it was decided to experiment with the Hudd system of automatic train control, whereby a driver is advised automatically just before passing each distant signal whether it is at "caution" or "proceed" and, if at caution, a gradually increasing brake application is given sufficient to pull up a train before a danger point is reached. This system is based on the principle of magnetic induction, whereby a permanent and an electro-magnet laid in the centre of the track and projecting one inch above rail level induce through an air gap the necessary action in a suitable receiver mounted on the locomotive with a clearance of five inches above rail level. Close application and continuous experiment has now produced a system which bids fair to be a valuable adjunct to safe operation.

We have, of course, not relaxed in our main policy of increasing the safety factor in railway travel by the fuller provision of track circuiting. Track circuiting, as its name implies, consists of a low voltage circuit formed by the two running rails, whereby any pair of wheels across such rails forms a short circuit *via* the axle and de-energises a relay at the end of the section concerned, such relay being used to lock electrically the lever of any signal leading on to such section of track. By this means a train is automatically and effectually protected against failure of the human element. At present we have 7,700 track circuits in use throughout the system, most of which are on important running lines.

#### Air Transport

The past year has seen several important developments in the matter of internal air line operation. The Cadman Committee reported that there was evidence that the internal air line companies were gradually coalescing into a number of groups to the benefit both of their prospects and services to the public. It was also the committee's view that the railway companies are making a useful contribution to civil air development. Later the Government set up a Licensing Authority for internal civil air lines, and announced that a subsidy of £100,000 per year would be distributed to licensed internal air line operators for five years. Applications for licences are now under consideration for the services in which the L.M.S.R. is interested.

Turning to our actual operations, the London—Belfast—Glasgow service is now in its fifth year of continuous operation, and has maintained its reputation for reliability. We operated approximately 470,000 aircraft-miles in 1938 and the over-all regularity was more than 98 per cent. In the same period we carried 7,000 passengers and 540,000 lb. of mails and freight. The traffic is steadily increasing from year to year. We can still claim that no passenger has been injured in an accident on this service. Last year we operated during the summer months an experimental direct service between London and Glasgow *via* Liverpool in connection with the Empire Exhibition. Apart from this, operations were not materially different from those in 1937. I told you last year we had merged our interests serving the Isle of Man with those of the competitive company in that area. In Scotland two new companies—Scottish Airways and Western Isles Airways—have been formed in which the L.M.S.R. Company has joined with MacBrayne and British Airways to provide adequate air services to the public.

#### Research

We have completed a long range of research on the causes and prevention of locomotive tyre failures, which has proceeded side by side with a series of improvements introduced by the Chief Mechanical Engineer, as a result of which the causes are now generally clear, and the appropriate changes embodied in modern design entirely meet the theoretical requirements which the investigation has brought to light. An important result which has followed from the provision of our new laboratory at Derby is an increase in the amount of more fundamental research which we carry out. Thus in addition to the usual volume of routine work and *ad hoc* investigations, we are engaged on several researches which are already providing, not only the answers to our immediate problems, but also new knowledge of great value. For example, an investigation has been made into the value of various degrees of finish in machining operations, in order to determine the most economical finish required to avoid liability to failure. This work has not only assisted in improving our own practice, but has added considerably to the general knowledge of the subject. Similarly with paints, improved methods of testing have facilitated the development of a range of new finishes, some of which are embodied in the Coronation Scot train now touring the U.S.A. In this field also we are studying in a very complete way the various methods of preparing steel surfaces prior to painting, in the course of which a new inhibitive wash and primer have been developed, which are being tried extensively on bridges and other large structures with encouraging results. On the metallurgical side we are playing an important part in the widespread investigations that are being made in the use of high tensile structural steels, with particular reference to their weldability and resistance to corrosion. Thus the work of the Research Department, in co-operation with the other branches of our organisation, grows in importance and value.

#### Marine Department

Important developments are being made on our Stranraer and Larne cross-channel service. To develop still further the traffic on this route, and in particular the conveyance of motorcars, a diesel-engined combined passenger and motorcar ferry vessel of special design is being constructed, capable of carrying approximately 80 cars and 1,500 passengers. When this vessel is in service it will be possible for cars to be driven on and off the boat under their own power, thus avoiding handling the cars by crane. As a further step in modernising and improving the facilities by this route, and at Stranraer Harbour, the other vessel which will assist in maintaining the service, namely, the *Princess Maud*, is being converted from coal to oil burning. The *Princess Margaret* will be released by the provision of the new vessel and made available for our other Irish services, which have greatly developed in recent years.

#### Railway Charges for Merchandise Traffic

I shall be surprised and disappointed if any of you are not fully aware of the proposals which we have made to the Government through the Minister of Transport for a drastic revision of the law governing the fixation and quotation of charges for the conveyance of all classes of merchandise traffic and the statutory requirements attaching to them. It has become known as the claim for a "square deal" because we have asked for complete equality with our competitors, principally road hauliers and coastwise shipping, who are entirely free from the mass of statute and case law and governmental regulation imposed upon us. In my maiden speech to you as Chairman eleven years ago I dealt—not with maiden brevity—with our disabilities and I have not failed to refer to them at each subsequent annual meeting. In February, 1928, I was most concerned with the undercharges made on our competitors for their use of the public roads and the need for powers to operate our own road transport. These powers we ultimately secured with satisfactory results which disproved the fears of the opponents to our application and the pessimistic critics of the use of our powers, who suggested we were going to lose millions



of money, indulge in wasteful competition, secure a monopoly, rook the public, &c.

### Appeal for Co-ordination

I see that then I put in the forefront first the public interest, including the interests of those such as the heavy industries who are more or less compelled to use the rail, and secondly justice to the railway shareholders. I then stated that transport by road and rail required co-ordination in the public interest, and that the most economic combination of these two means for each particular set of circumstances must be discovered and made available, and that with road powers the railways would be able to explore the possibilities of co-ordination by voluntary arrangement between the two parties. We have in fact very largely secured this on the passenger side, but on the goods side our success has been small because of the far greater number of operators who could not only "cry havoc" but, owing to their use of their freedom, played havoc with our Commercial Department, working under a shackled rate system. I further pointed out that we had no desire to force traffic on to the rails, but that every ton of traffic which *economically* ought to be on the rails and went on the roads was a loss to you and burdened the heavy industries unnecessarily. I have inflicted upon you this glance at the past because it aids a true perspective now.

Since 1928 a system of regulating road haulage licences has been introduced which in some respects bears a slight resemblance to the obligation placed upon the promoters of a new railway line to show that their proposals are in the public interest, but of course unlike railway promotions in the past, the new licensee is not required to pay compensation for damage to other providers of transport.

### Rate-Control Proposals

But as regards co-ordination in charges nothing has been done. After several years' protests by the railway companies a Royal Commission was appointed in 1928 to report upon transport questions. In its final report in 1931 it found it impossible to make a positive proposal on co-ordination but recommended the setting up of a Transport Advisory Council for the purpose, amongst other things, of advising the Minister of Transport on the co-ordination of transport. In 1933 this council was authorised by Parliament and set up in 1934. It dealt with various other matters and after prolonged discussions in July, 1937, reported to the Minister on road and rail transport expressing the view that *all* forms of transport should, where practicable, be rate controlled and recommended that legislative steps should be taken at the earliest possible moment for machinery to secure uniformity of wages throughout the road transport industry, observing that no real co-ordination as between road and rail would be possible without it. The council further recommended the internal creation of a rate structure by the road transport industry and the setting up of machinery for its enforcement, including a Road Rates Tribunal, and it was hoped that road and rail rates agreements would then be achieved on a voluntary basis. The Minister of Transport announced, as I informed you a year ago, that the Government accepted the broad principles of the report and proposed to introduce legislation accordingly. This was not introduced in the 1937-38 session or referred to in the King's speech opening the 1938-39 session.

### Increase of Road Competition

Since July, 1937, road competition increased steadily in the manner I have earlier explained and certain road interests developed a strong attack on the railways, completely misrepresenting their position and suggesting that the adoption of the 1937 report would lead to a railway monopoly. The railways made no reply beyond representations to the Government upon the development of new diversions of traffic which were seriously impairing the railway rate structure required by Parliament, and making enquiries on the prospects of legislation on the report. No assurances were apparent after the legislative programme of the Government for 1938-39 was published, so the railways submitted

new constructive proposals to the Government and asked for early action on them. These proposals are briefly condensed in the report before you. The existing statutory regulation of the railway charges for conveyance of merchandise and the requirements attached thereto should be repealed and the railways thus placed on terms of equality with other forms of transport. Such equality would remove particular obstacles which have been cumulatively prejudicial to the efficiency of the railways in recent years, and would then assist Parliament to deal with transport charges generally by equal regulations, and it is hoped lead to a large measure of co-ordination of transport.

We were criticised from various quarters by statements that this was a somersault, a *volte-face* or something else equally picturesque, that we wished to penalise the heavy trades, that we wished to favour the heavy trades at the expense of the small traders, that we were not entitled to equality on rates because passenger trains in London were overcrowded at the peak hours or because particular long-distance trains had run late in a blizzard, that the heating apparatus did not always work, that the remedy was to close unspecified branch lines, that the remedy was to write off some of your capital (making the present unfair return of profits look prettier on paper), that the creation of one huge transport amalgamation was the remedy. In short, that we should not now have equality because justice to us might check interests who are now gaining daily by the injustice and by delay in putting it right.

### A 1933 Statement Recalled

Might I again hark back to what I have said to you before—this time in 1933, six years ago. I then explained the nature of the statutory regulation of these charges, the classification under which Parliament placed higher charges on valuable goods and lower charges on the less valuable goods of the heavy trades, and the inroads of road hauliers on the former traffics. I added, and I quote verbatim: "While we believe that reasonable regulation of conditions must be in the interests of all branches of the transport service, if it is not to fall into chaos, which in the long run will inflict far more damage upon the user than any immediate advantages he may snatch from it, at the same time the existing situation is intolerable. The effect of an entirely free-lance and irresponsible competitor upon the system of rates classification is of immense importance to the public and the heavy trades, and the immediate gains of a section of the community will be dearly bought at the expense of the remainder if a solution is not found."

If the present proposals are a somersault the reason is to be found in the fact that a situation which I described as intolerable six years ago has grown worse to the knowledge of everyone, including the Government, and nothing has been done. That is why we urge Parliament as the protectors of the interests of the public and not of a section of it for a "square deal"—now.

The proposals have been referred to the Transport Advisory Committee, of which I am a member, and I do not now propose to comment on their proceedings. I hope, however, that adequate and early action will be taken in Parliament and if no proposals are made or proposals which your board considers inadequate, they will summon a special meeting of the stockholders of all classes, for this is a matter which affects the debenture stockholders also, in order to make the companies' position clear to you and to the public in general.

### Opposition to "Square Deal" Proposals

While I cannot at this stage give you the detailed position of the discussions, it is clear that we are being opposed by powerful interests, but I would refer to the arrangements entered into with the road haulage organisations, particulars of which have been published. Contingent upon our proposals being adopted—and the road interests are prepared to support them—we shall co-operate actively with them for a new stage in transport history, the co-ordination of rates and services, and the spirit in which they have made this arrangement augurs well for a resolute joint attack upon this difficult problem.

### How Stockholders Can Help

Meanwhile we have already indicated ways in which you, as shareholders, can help us. When you discuss the railway companies' claim for a "square deal" with your friends be sure they understand the following points:—

The railways want to be free, like their competitors, to make charges by ordinary commercial methods. They no longer possess a monopoly and old restrictions are no longer necessary. They do not oppose regulation, provided it applies to all alike. They have already undertaken that their charges shall be reasonable, and that the trader will have the right to appeal against any charge he thinks unreasonable—this is more than the trader has at present. The small trader will have the same rights as the big one. The railways desire true co-ordination of transport in the national interest. The "square deal" is a step towards co-ordination, which is impossible under present conditions.

The "square deal" does not restrict anyone else.

The need for action is urgent, not because of yesterday's traffics or tomorrow's, but because of the cumulative effect of many years' erosion.

### The Prospect

What can I now profitably say upon the prospects ahead with all the world guessing? The railway prospects depend upon economic prospects, and economic prospects are particularly dependent upon international political prospects, and these in turn are in the lap of several considerable gods. Reports from the separate industries are varied and uncertain, and cannot be easily summarised, though there seems to be discernible on balance a little more optimism in the last two or three weeks. It would not be honest to put it any higher, and I can only say that your officers and staff who have responded so magnificently to every call made upon them in 1938, are ready to secure the best from all that may come in 1939.

I now move that the report now read, with the statement of accounts, be received and adopted. I will ask the Deputy Chairman to second the resolution.

Mr. E. B. Fielden (Deputy Chairman) said he would like to refer to something that had taken place during the last 12 months which really had an effect upon this company, although it did not appear in the report. During those 12 months His Majesty had conferred upon their Chairman the dignity of a peerage. The reason why there was no mention of it in the report was, he believed, that the Chairman, having to sign the report, did not like to have anything in it referring to himself. That did not prevent them at this meeting from referring to this matter, and he believed that he represented the feelings of everyone present in conveying to the Chairman their most hearty congratulations on the honour which had been conferred on him. (Applause.)

He then seconded the resolution.

The Chairman: I am grateful to you, Mr. Deputy Chairman, for your very kind remarks, and to you, ladies and gentlemen, for your very kind reception of them. The resolution has been proposed and seconded, but before putting the next resolution, I am going to ask you to make your comments or to put your questions in the ordinary way.

### Remarks of Shareholders

Councillor Wilson, speaking at considerable length, said he thought the ordinary and preference stockholders had now reached the most difficult position in the history of British railways. They had £135,000,000 invested in what he called the national investment upon which there was no return at all in respect of the year 1938. In his opinion the railways were exploited by the Government and by vested interests for the benefit of certain industries, despite increases in rates granted by the Railway Rates Tribunal. Certain classes of traffics remained unaffected because the 5 per cent. increase was applied only to traffic charged at more than 10d. a ton. Accordingly he deduced that the dividend of the ordinary and preference stockholders had gone as a subsidy to certain industries. Moreover he felt that it was a waste of money to have sent the Royal Scot

and now the Coronation Scot trains to the United States at a cost of more than £100,000, as Great Britain did not sell trains in the United States and was not interested in traffics outside the United Kingdom.

Another great difficulty was the increase in the issues of debentures which he attributed to the fact that unrest in Europe had induced the bankers and financiers to unload £27,000,000 on British railways. The L.M.S.R. allotment of £9,000,000 from the Railway Finance Corporation was to be spent on buildings just for the benefit of satisfying the bankers and financiers on good safe security and "pushing the ordinary and preference stockholders right out of the boat." Councillor Wilson proceeded to outline his own business career to show that he had invested in railway stock in order to be able to retire and enjoy a safe income, and stated how disappointed he had been. Among many suggestions which he advanced were that the annual meeting should be held at 3 o'clock in the afternoon; that stockholders should be entitled to travel on the L.M.S.R. to the meeting at the same privilege fares as the company's employees; and that an age limit should be fixed for the retirement of directors.

Sir Charles Stuart-Williams endorsed the remarks made by the Deputy Chairman regarding the honour conferred upon Lord Stamp. Their Chairman, he said, was so largely and beneficially a national figure in so many respects, with regard to railways, building societies, banking, crossword puzzles, children's parties, and many others too numerous to mention, that he was to all of them a very live and likeable item in our national life. Regarding the year's results, he said that, despite a very natural feeling of disappointment, a consideration of the figures given in the report showed that the board of directors had to cope with the additional expenditure of £1,400,000 a year, and that they managed in the latter half of the year to wipe that out and to finish the year £340,000 less—no small achievement. Regarding the "square deal" campaign, he thought that the road operators on the whole had secured the better part of the "gentleman's agreement" that had been reached. He hoped that the attitude of the Government and the Minister of Transport to the railway claims would not be one of masterly inactivity. He suggested that the meeting should pass a resolution somewhat as follows: "That this annual general meeting of stockholders of the London Midland & Scottish Railway urges upon the Prime Minister and the Government the necessity, in the interests of the nation, of early legislation to meet the demands of the four main-line railways for the removal of the antiquated and unnecessary restriction which now hampers their operations and competition with other forms of transport."

Mr. A. P. Iliffe supported the view put forward on behalf of the stockholders by Councillor Wilson saying that in facing a "dividendless" future many homes would have to be broken up. He submitted that the policy and outlook of the L.M.S.R. directors for many years had been, in some respects, short-sighted, weak, and erroneous. For his part he did not think that the railways were done for. A much more forceful, purposeful, and definite policy could still make railways pay. He moved an amendment to the adoption of the report in the following terms: "That paragraph 4 only of the report of the directors (that is the paragraph dealing with the payment of dividend, because naturally we cannot expect debenture holders and people to wait for their money while we are trying to put things right), be adopted at this annual general meeting, which annual general meeting shall then be adjourned until Friday, March 10, at the same hour and place, after setting up a Committee of Inquiry elected from the stockholders present, to confer with the present board of directors in the interim concerning the accounts, directorate, and future policy of this undertaking."

Mr. Watson made reference to the fact that some of the company's hotels did not pay and inquired whether it was true that Mr. Towle received a percentage of the hotel takings in addition to his salary. He commented adversely on what he termed multiple administrative appointments and said that the business of the Chief Commercial Management, Chief Officer of Labour and Establishment, Chief Staff Superintendent, Research Department, and perhaps others,

should all revert to the jurisdiction of one Chief Goods Manager and one Chief Staff Clerk, as was formerly the case. He considered that the gratuitous monthly issue of such publications as *On Time* and *Quota News* was wasteful, and held that the company was being victimised by trade unions who used their power deliberately against the interest of the shareholders.

Mr. Mason considered that the management of British railways was inefficient. The directors of the L.M.S.R., he said, held 142 directorships in England, and the whole of the railway directors of the four main-line companies held 550 directorships. He also supported the suggestion of a previous speaker that directors should retire compulsorily at the age of 65. The directors of the company, he had no doubt, were men of integrity and ability, but he questioned their business acumen. So far as the time of holding the meeting was concerned he was in favour of 2 o'clock.

Mrs. Bunney also spoke on the subject of multiplicity of directorships and inquired how many hours the directors of the L.M.S.R. spent in the company's service and what were their fees.

Mr. F. S. Hunter inquired how many ordinary shares, if any, were held by the directors.

At this point various questions were asked about the propriety of moving other resolutions and of amendments, and the Chairman ruled that as the proceedings were conducted under a Statute he was not prepared to vary the order nor to take other resolutions until the one before the meeting (duly proposed and seconded) had been disposed of.

Mr. C. W. H. Pfeiffer advocated reductions in wages; said the British railway worker was the highest paid worker in Europe, and the second highest in the world; and pointed out that employees had security of tenure while railway shareholders were starving.

Mr. G. F. Parkes associated himself with the complimentary remarks made by the Deputy Chairman in regard to Lord Stamp's elevation to the peerage. On the question of accounts he asked for information about the fact that Account No. 16 showed the maintenance of motor vehicles (in spite of the Research College at Derby) had increased by approximately £100,000 or 40 per cent. over the previous year, whereas the number of motor vehicles owned by the company had increased by only 5 or 6 per cent. Mr. Parkes also sought information as to the cost of the Derby College and the Derby Research Office.

Mr. Pantlin also alleged inefficiency of management and referred to damage and pilferage during the transit of goods.

Mr. Chamberlain thought that all the points involved in the "square deal" campaign were known 15 or 16 years ago, and felt that too long a delay had occurred in attacking the matter. He also cited various instances in which he felt that the other main-line railway companies managed particular sides of their business in a way superior to the L.M.S.R.

Mr. Lucas enquired whether passenger engine drivers received as much as £7 to £7 10s. a week and wished to know whether they were paid on a mileage basis.

Mr. Grant submitted three questions: (1) Where it had been found necessary to close branch lines or where railcar services had been inaugurated, what endeavour did the railway companies make to obtain Parliamentary sanction to run buses in lieu of train services; (2) what steps did the railway company take to combat encroachment on their merchandise traffic by small bus proprietors; (3) was the Stockholders' Union consulted by the chief officers of the railway companies before final decisions were made on such subjects as salaries, wages, and superannuation?

Mr. Barnabas Russell paid tribute to the outstanding ability of the Chairman, but expressed far more mixed feelings regarding the remainder of the board of directors. He said the result of his researches showed that only three directors had a stake of any size in the fortunes of the company. Moreover eight of the directors on the L.M.S.R. board held between them 96 directorships quite apart from affiliated companies, and three of them had no fewer than 17 apiece. He doubted whether they had adequate time to devote to the services of the company. Mr. Russell also spoke on what he considered to be the inadequate exploitation of cer-

tain of the company's valuable lands; and he supported previous speakers in the view that wage reductions should be made in the interests of the ordinary stockholders.

### Chairman's Reply

The Chairman: Well, ladies and gentlemen, we have had a very vigorous discussion. There have been many comments but not very many questions. It will be quite impossible for me to comment at great length on all the different points that have been referred to, but you may be sure that they will be very carefully studied. Many of them are based on misapprehensions of facts. I will deal, as far as I can, with the actual points which have been raised or suggested.

We are very grateful to Councillor Wilson for the continued interest he takes in our affairs. I cannot quite follow his arithmetic as to the amount of money that could be produced by the additional charge and its productivity in dividends; but I am quite sure that whatever validity there may be in the figures will be before the members of the Railway Rates Tribunal at their next meeting where they have the statutory task, apart from anything we may ask, of fixing such charges as will make our net revenue as high as possible.

Then there was the suggestion that we should have the meeting at three o'clock in the afternoon (Cries of "Two o'clock"). If it is in the shareholders' interests, we will carefully go into the question of whether another time would be more suitable to the majority, and govern ourselves accordingly in a future year; but the present time has been found convenient over a period of years. As I say, it is nothing to us; we can meet at whatever time is convenient to the majority of the shareholders.

With regard to the proposition for privilege passes for the 300,000 or 400,000 shareholders, who might be attracted to a meeting in Hyde Park, we can no doubt conduct our proceedings with megaphones. That matter will be looked at by you in its true light, and you will see how impracticable it would be with a company of this size.

I will deal presently with the question that Councillor Wilson proposed to move a resolution upon, unless he would accept my ruling that it cannot be moved. If he wishes I will deal with it now.

Councillor Wilson: Thank you very much for giving me the opportunity, Mr. Chairman; but I really think that, seeing that fourteen days' notice in writing has been given to the Secretary of my intention to move this resolution, that the proxies have been lodged and the cards you have in your possession have cost me £300 from my own private purse, he can hardly expect me to overlook the two resolutions I intend to move. If you are in favour of the resolution that the directors should retire at 70, and that you travel at the same low rate as the employees, then I will accept the offer made by the Chairman; move the resolutions; take the vote if they are seconded, and a poll is demanded; and I think the Chairman will be fair enough to accept the resolutions.

The Chairman: I know your intention. I know when to speak on the subject; but I will not develop it any further now.

I am not sure that any actual questions were asked by Sir Charles Stuart-Williams. Questions arising on the same kind of points that he made were raised by others, in connection with our attitude towards the question of road competition, and the "square deal." It was stated by some that we ought to have taken up this matter in 1919 when motor transport was born. The railways were in the possession of the Government until 1921. Immediately they came out of Government possession, we promoted a Bill in Parliament to secure some protection in this respect. The Railways Act of 1921 gave us our new constitution; but soon after that we applied for certain powers, and they were finally refused and dropped. Then came the difficult year 1926, and immediately that general strike was over, we set about again in Parliament and eventually succeeded in 1927-28. Each year we have had a programme to improve that situation. I do not think it can be fairly said that the railways as a whole have not been alive to this difficulty, and have not taken the best steps they can to put it right. What you seem to forget is that we are working



under Statutes, and it is only begetting the Government of the day to support Bills for the alterations of the Statutes under which we work that we can get any different commercial conditions for our operations.

I would like to correct a misapprehension. Reference was made in a very optimistic and very courageous speech by Mr. Iliffe, which we were pleased to hear, to the future, and I think we share his feeling for the future. He said, if we have a "square deal" we have a great future.

Then reference was made to the £10,000,000 loss. The actual words were, in pure arithmetic, that we were £7,000,000 down on receipts in 1937-38 and that we were £1,000,000 down in the first five weeks, and at that rate we might easily be £10,000,000 down on 1937. That is not anything but a mere statement of simple arithmetic. I am just as optimistic of the future of the railways as Mr. Iliffe is, provided that we can get the proper conditions under which to work, and not the conditions as they were 100 years ago.

A stockholder: Why do the directors travel free?

The Chairman: I will deal with that question presently. Mr. Watson, of Liverpool, asked a question about hotels. The answer is that our hotels do pay, and that we do not pay any commission on profits to the managers. The second point made was with reference to the journals *On Time* and *Quota News* being wasteful. We find that those staff magazines are a very great source of increased efficiency and raise the general tone of the workers to compete with each other. It is the considered view of our officers and departments and the board that those magazines do a tremendous lot to improve the efficiency of the railways. Then there were some questions asked about modernising canvassing. I did not quite get the point, but I can assure you that the Chief Goods Manager's Department is fully alive to all modern methods and, so far as our statutory powers allow us, we do all we can to meet competition in those directions.

Mr. Mason, in his indictment of the management and in a rather amusing speech, referred to the fact that we ought to have business ability amongst the directors. We do our best to secure that, and it cannot be denied that the immense range of knowledge that our directors possess, which is necessary in the management of a business like this, is connoted by the other great interests with which they are also connected. Then the gentleman who had never been to these meetings for 17 years until today does not seem to realise that every new director, after being carefully chosen for the particular reasons of the vacancy, comes up for your election immediately upon his selection at the very next meeting; so that you do, in that regard, have a full knowledge of all new appointments to the board.

Reference has been made to the Coronation Scot. Well, I told you all about that last year and you greeted it with great cheers. We told our American friends you thought it was a good idea. We know the Royal Scot visit was of immense benefit to our men, to the organisation, and to our technical departments. We believe that we are going to have even better results from the Coronation Scot. At any rate, these matters have to be entered into in good time. The contracts were entered into after our last annual meeting. I am going to report to you next year what I believe will be a very interesting and profitable story on that subject. You do not know what you are talking about.

Then the matter of the age of the directors was referred to. It is true that officers retire at between 60 and 65. I am not going to argue about the theory of age; I am going to tell you the facts. I got out the figures of retirements, other than losses through death, in the last few years, and sorted them out into those that were under 70 and to those that were over when they retired. It would not be, I assure you, any insult on either side if I tell you that those over 70 were, in every respect, equally and, perhaps, more valuable men than those who retired under 70. I have their names, and I know the details about them. I refer to Sir Thomas Williams. Mr. Gustave Behrens retired at a great age, but after 70 he rendered most marvellous service to the railways; he had great experience; his counsel was of great advantage to us, and he was active in every direc-

tion. I could not imagine anything worse for the railways than to have retired him on some automatic level. He simply had more in his head, after 70, than the majority of you have up to that time. Then, take Lord Faringdon of the North Eastern Railway; he died at a great age still in harness; he was always recognised as a great financial authority; he was a most keen and experienced man right up to the end; one of the best the board ever had. If you start this theory about age, you simply get lost on the facts. I could give you a great many other instances of great experience and judgment, and those are things we want on our board. So far from being a disqualification to have a wide knowledge and experience of other trades and businesses, it is a thing we want. When questions of policy are worked out, such men are able to bring something more to bear upon them than a narrow knowledge; they know, from their wide experience, how that kind of thing works elsewhere and what its reactions will be in industry, political life, and society generally.

Then reference has been made to the directors' fees. They are shown in the accounts. Included with the monetary privileges are passes on the railways that the directors use. In the main, all travel on the railway is for business purposes, and even when they travel on their own business—I am not saying whether it is bad or not, but there is nothing new about it—all the time they are travelling they are gaining information about the line. Even if they paid fares in full it would have a most negligible effect upon the accounts.

A gentleman on the left was saying that the proper thing to do over this wages question was to reduce the staff. I think you will find that there has been a considerable reduction. I believe that today, compared with a year ago, we have something like 12,000 less employees. Various questions were raised as to the points that ought to be put to the National Staff Tribunal. All of the points put have recently been argued at full length and publicly argued; every one of them has been put; the wages of the engine-drivers; the mileage method upon which they go, and all the other points were put. Every one of them (I took a note of them at the time) has been argued before that authority. There is that authority set up to deal with our wage problems, and it is quite idle to say that we do nothing about it. Our case is argued with great pertinacity and skill. The case of the shareholders is being continually represented, and they are the constituted tribunal; we cannot get round that.

Then a question was asked about the maintenance of motor vehicles. The figure to which reference was made includes, not only the maintenance of the current vehicles, but their renewals. I think that will explain that point.

With regard to the question about the cost of the Derby Research College, the laboratory will be about £30,000; of course, that covers a tremendous amount of routine testing and special *ad hoc* work. We get wonderful value for the money. The school has not been running long enough yet for me to give you the annual cost. I cannot give the current cost of working, because it has had only one to two batches of pupils through; but in my next speech I will tell you the full story. We are quite convinced that we are going to get the very best methods spread over the whole of our vast system much more quickly by that device than by any other, and we believe it is one of the best things that you will ever have had done on this railway.

Then the question was raised about our vast assets and Broad Street station. We do have committees to examine all these problems one by one. Exactly what the questioner asked is what we do. We deplore the pilfering and the breakages. We do our best to get the right spirit into the staff and to reduce those things to a minimum.

Now I believe I have covered the questions and, as I say, it is quite impossible for me to comment upon everything that has been said, though it will be very carefully studied. If I have met the points, you will, perhaps, be ready to take the resolution which has been proposed and seconded: "That the report now read, with the statement of accounts, be received and adopted."

Mr. Lucas: I asked: Was it a fact that railway engine-

drivers on the express trains picked up £7 to £7 10s. a week?

The Chairman: I think all the points you made were referred to in the public statement made before the tribunal. I have no doubt that is true.

Mrs. Bunney: My question was: How many hours, approximately, in a year do the directors give to the business of this company?

The Chairman: I cannot tell you exactly, but I know it is a very considerable slice of their time. I know they come up here, and I work them very hard when they come; they get no peace from me.

Mr. Lucas: Could you answer my question yourself, sir? Is it a fact that express engine-drivers receive £7 to £7 10s. a week or within a week?

The Chairman: It is quite a fact that that amount is occasionally received. It is also a fact that they are paid on a mileage basis; and these facts have been so publicly stated elsewhere that it seems unnecessary to ask me about them.

I want now to put the resolution to the meeting: "That the report now read, with the statement of accounts, be received and adopted."

On being put to the meeting, the resolution was declared carried.

The Chairman: I wish now to move a second resolution: "That final dividends for the year ended December 31 last be hereby declared (less income tax) as follow: £2 per cent., upon the four per cent. guaranteed stock, £2 per cent. upon the four per cent. preference stock, £2 10s. per cent. upon the five per cent. redeemable preference stock (1955)."

Mr. Fielden: I beg to second that.

On being put to the meeting, the resolution was declared carried.

The Chairman: My third resolution is: "That Sir William Guy Granet, G.B.E., William Lionel Hichens, Esq., George Reginald Thomas Taylor, Esq., be, and they are hereby, re-elected directors of the company."

Mr. Fielden: I beg to second that.

#### A Poll Demanded

Councillor Wilson: I oppose the resolution, and our legal adviser tells me I am now in order. I oppose it on the ground that each of these directors shall be elected singly. If the Chairman is now prepared to take the resolution, I am going to move: "That it shall be compulsory for all directors of the London Midland & Scottish Railway Company to resign from the board on reaching the age of 70 years without further reward or remuneration." If this resolution is seconded, I herewith demand a poll.

Mrs. Wilson: I second that resolution.

Councillor Wilson: There is a resolution before the meeting, Mr. Chairman; it has been seconded, and a poll is demanded. It is: "That the directors retire at the age of 70 without further reward or remuneration."

The Chairman: That is out of order completely, for statutory reasons. I cannot take it.

Councillor Wilson: Then I give you notice that I shall appeal to the Courts to try to find out the validity of that resolution. I am legally represented in this matter.

The Chairman: Very well. I am going to put this resolution to the meeting: "That Sir William Guy Granet, G.B.E., be, and he is hereby, re-elected a director of the company." It has been seconded.

The Chairman: Is it the wish of the meeting that they be put one by one?—"Yes."

The Chairman: Then I propose: "That Sir William Guy Granet, G.B.E., be, and he is hereby, re-elected a director of the company."

Councillor Wilson: I oppose it, on the ground that he is over 70 years of age. He was born in October, 1867.

Mrs. Wilson: I second that proposal.

The Chairman: Will those who are in favour please show?

Councillor Wilson: I demand a poll, Mr. Chairman.

The Chairman: Those in favour of this proposition please show in the usual manner.

After a show of hands,

The Chairman: I declare the resolution carried.

Councillor Wilson: Ladies and Gentlemen: Let us conduct this meeting with as much dignity as possible. It has been moved and seconded that Sir Guy Granet be not re-elected on the ground that he is over 70 years of age. A poll is demanded that no director shall be re-elected who has attained the age of 70.

The Chairman: Mr. Wilson knows, of course, that the proxies we have are very greatly in excess of those he holds. I am going to ask him whether he wishes to put this company to the very great expense and delay that is involved by his action. He is perfectly entitled to take the point he makes to the Court if he likes; but on the question of adjourning this meeting for the proxies to be obtained, and the poll to be taken, I appeal to you that it is not really common sense.

Councillor Wilson: I have been asked a question by the Chairman: Would I withdraw and save the expense? My answer is: "Decidedly not." A poll is demanded and a poll must be taken.

The Chairman: Before we proceed to that point I will take the other resolutions: "That William Lionel Hichens, Esquire, be, and is hereby, re-elected a director of the company."

Councillor Wilson: If he is under 70, I second the resolution.

The Chairman: I put the resolution to the meeting.

On being put to the meeting the resolution was declared carried.

The Chairman: If you are worried about the question of age, Mr. Hichens is not 70 by a long way.

The Chairman: I put the third one: "That George Reginald Thomas Taylor, Esquire, be, and he is hereby re-elected a director of the company." Mr. Taylor is 63 or 64. Those of you who agree with the resolution please signify the same in the usual manner.

On being put to the meeting the resolution was declared carried.

The Chairman: Then I have a fourth resolution which will be moved by a shareholder.

Mr. J. F. Bradford: Lord Stamp, ladies and gentlemen, I have very great pleasure in moving: "That Frederic Ditchfield Morris, Esquire, be, and he is hereby re-elected an auditor of the accounts of the company."

Councillor Wilson: I second the resolution.

On being put to the meeting the resolution was declared carried.

The Chairman: Now, Councillor Wilson, you want to demand a poll?

Councillor Wilson: A poll is demanded on resolution No. 2, but resolution No. 1 is to move that the stockholders be allowed to travel to this general meeting at the same fares as our employees.

The Chairman: That resolution is out of order, and you cannot have a poll upon it. You cannot have a poll upon a resolution that is out of order. You have asked for a poll on the re-election of two of the directors. Mr. Wilson, do you wish to put this company to the great expense of going through all these proxies—all the paraphernalia of a poll?

Mr. Mason: Mr. Wilson, I supported you at the meeting today, and I should like to say I do think that now you are making a big mistake in demanding a poll and putting this company to a big expense. Let common sense prevail; you are beaten before you start. Why waste the time of the meeting?

The Chairman: Mr. Wilson, our estimate of the relative position of the proxies is that we have 196,000 votes against 3,000, but it will take a good many days to verify and scrutinise the whole of that number. I am appealing to you not to put us to that great trouble and expense.

Mr. Iliffe: May I just say one thing about it, Mr. Chairman? When we were speaking about the election of directors in this company you said in your reply that, if anybody were nominated a director of this concern, immediately at the next board meeting he would be submitted from this meeting, and, therefore, we had our choice, but in every case when you do that, apparently there are 190,000 proxies in your favour against 3,000. This is, therefore, our first

chance to get rid of this proxy idea—that at our next meeting we have got to get proxies.

The Chairman: I am afraid you cannot get rid of the proxy idea, because it is part of the statutory machinery, and, if we have those proxies, it is because the shareholders think we know what we are doing in the suggestions we are making. If Mr. Wilson will not withdraw, then we will have to fix a time for another meeting, at which the result of the scrutiny will be declared. Mr. Wilson has to appoint scrutineers to look at the proxies. We will appoint ours. If the proprietors will leave the meeting by the door where a poster "for" or "against" is exhibited, and as they leave will sign the polling sheets, they are in readiness at the door. We will publish the result of the poll in *The Times* on Tuesday, February 28, and, if Mr. Wilson wishes to examine the proxies, it will be at least another fortnight before they will arrive at the same result. I am advised that there is no need to adjourn the meeting. The scrutiny can take place and the result can be published. We ask you to notice the doors marked "against" and "for" as you go out. Mr. Wilson, I thought that you might be willing to save the trouble of another meeting.

Councillor Wilson: Certainly not.

The Chairman: Very well. Then this meeting stands adjourned till 2 o'clock today fortnight.

Mr. Mason moved that a hearty vote of thanks be given to the Chairman and to his co-directors.

This was seconded by Councillor Wilson and carried unanimously.

The meeting was then adjourned till Friday, March 10, at 2 o'clock, in order to receive the report on the result of the poll.

#### SPECIAL GENERAL (WHARNCLIFFE) MEETING

A special general meeting of the London Midland & Scottish Railway Company was held at Euston station on Tuesday, February 28, the Rt. Hon. Lord Stamp of Shortlands, G.C.B., G.B.E., Chairman of the company, presiding.

The Secretary (Mr. O. Glynn Roberts) read the notice convening the meeting.

The Chairman said: This meeting has been convened in accordance with the Standing Orders of Parliament in order to submit for the approval of the proprietors the London Midland & Scottish Railway Bill which is being promoted in the present session of Parliament. The Bill contains powers for the company to acquire lands in various parts of the system which are required for the improvement of the undertaking, and provisions are included to enable the company to discontinue a small portion of their Lancaster Canal which is unnecessary for navigation, and the site of which can be sold. Provisions are also included to enable the company to stop up public roads traversing the company's property at Warrington and at Hoyland Nether in the West Riding of Yorkshire, which have become unnecessary through the diversion of traffic to other routes. The Bill also extends the time limited by the company's Acts of 1934 and 1936 for the construction of a connecting line at Hazel Grove and for the purchase of lands in various parts of the system.

The resolution for the approval of the Bill was put to the meeting and carried unanimously.

The Chairman explained that the only business to be transacted at the adjourned general meeting on March 10 would be the formal report of the result of the poll with reference to the re-election of two directors.

## GREAT NORTHERN RAILWAY COMPANY (IRELAND)

### *Chairman's appeal for "an Irish version of the 'square deal'"*

The annual general meeting of the Great Northern Railway Company (Ireland) was held in the Gresham Hotel, Upper O'Connell Street, Dublin, on February 28, the Rt. Hon. Lord Glenavy, Chairman of the company, presiding.

The Secretary (Mr. F. C. Wallace) read the notice convening the meeting.

The Chairman said: Ladies and gentlemen, it is with the deepest regret that we have to record the death of our late Chairman, Mr. W. B. Carson. His association with the company lasted over the long period of 31 years, during which he gained a knowledge of the undertaking in all its branches unrivalled by any but its most senior officers. As we who were his colleagues knew, as many proprietors who came in contact with him knew, there lay under his unassuming manner a deep concern in the company's affairs and a constant devotion to its interests. He was a man whom no successor would follow but with diffidence; a diffidence tempered only by knowledge of the abilities of the gentlemen who have been appointed deputy chairmen of the company, Sir George Clark and Mr. J. B. Stephens, and of the energy and initiative possessed by our new General Manager, Mr. G. B. Howden. I cannot but refer also to the loss which the Belfast & County Down Company suffered through the death of its Chairman. Mr. Barbour's connection with railway administration was almost exactly as long as that of our late Chairman; in the many conferences we have had with the County Down Company in recent years he always proved a shrewd and able colleague. The grave anxieties which of late have surrounded responsible positions in public transport undertakings must have contributed, I fear, to the untimely loss of two such exceptionally conscientious men.

#### **Cause of Transport Crisis Recognised**

For those anxieties no honest person would pretend to see an easy or an obvious remedy. But some more encouragement may be drawn from existing circumstances than has been possible in the past few years. At length the true

cause of the transport crisis is becoming to be recognised and that is the first step towards adequate relief.

This is not the occasion to debate questions which may be the subject of diverging representations before the inquiries now proceeding in Dublin, and Belfast. Much of the controversy which has raged around the transport problem has been aimless because the disputants had not first come to an agreement as to what, in fact, constituted the problem. Little progress will be made towards general acceptance of any solution without, as a first step, an accepted formulation of the problem to be solved. Some factors, however, which, in our experience, seem to be outstanding may properly be emphasised since they affect the whole future of this undertaking. One analysis, which in our view is the correct analysis, of the fundamental cause of the transport crisis is to be found in these words taken from the conclusions in the M'Lintock Report—"transport facilities as represented by both road and rail services and by private and public transport are greatly in excess of the country's needs." That being true of Northern Ireland, no detached observer would deny that it is also true of Eire. If the volume of trade were to be developed to the point where it could provide an economic use for such transport facilities as are now redundant there would be no crisis. But that eminently sound remedy does not lie within the sphere of transport; within that sphere there can only be considered the possibilities of adjusting transport facilities to real traffic needs.

#### **Increased Conveyance of Goods**

Some consider that in recent years there has been a great increase of traffic and assume that the growth of transport facilities is roughly proportionate to that increase. In such a view there lies an ambiguity which may lead to entirely mistaken conclusions. If traffic be defined as passengers and goods for conveyance, the term "increase in traffic" may mean either an increase in the volume of passengers and goods, or an increase in the frequency of their convey-



ance. It is goods, rather than passenger, business which has been causing the more pressing difficulties of public transport. In the case of goods, neither available statistics nor common experience for the last ten or twelve years indicate a growing increase in volume. The truth rather is that Ireland has not been able to afford, nor has it experienced during that time, a much larger consumption of goods, but that much the same, if not indeed a less quantity of goods has undergone a great deal more conveyance. The tendency for production to move out of urban areas in order to lighten the burden of rates and other costs, the adoption of restrictions on imports, the decentralisation of industry, are among the factors that would naturally involve increased conveyance for goods formerly produced at, or imported into, the places where their principal markets lie. Since the costs of all conveyance have to be met in the charges to consumers there has been a strong incentive, with prices already high, to resort to such available forms of transport as operate, apparently, at lowest cost. I say "apparently" because if there is an all-round insufficiency in the quantity of goods for conveyance the result must be, and it manifestly has been, to deprive other transport of its economic minimum of business. If public transport is to be preserved this condition cannot be prolonged.

#### Definition of Public Transport

It should not need to be argued that in the interests of the community public transport must be preserved. But we must be clear as to what is meant by "public transport." In Eire some opinion includes in that description the commercial haulier because he is engaged in selling transport to the public. But in what respects is he more "public" than the private seller on his own terms of any other service to the public? The commercial haulier has no regular obligations to anyone but himself. He maintains just so many vehicles, carries such goods, operates only such routes, and makes such charges as from time to time he finds profitable. The obligations in his licence prove in practice nominal; in the exempted areas of Eire he needs no licence at all. These observations are not made for the purpose of depreciating the services rendered by commercial hauliers; we all recognise that they have been found advantageous and convenient by many members of the public. Their purpose rather is to show how very wide the gap is between the commercial haulier and the real "public transport," such as is operated in Eire by the railway companies and the Dublin United Tramways, and in Northern Ireland by the railway companies, the Road Transport Board, and the Belfast Corporation. The operations of those bodies are regulated in detail by the law; they are bound and ready at all times to convey every passenger and every class of goods, according to published timetables and at regulated charges; they maintain a large reserve of vehicles and rolling stock for peak traffics; excursions and seasonal business; they furnish stations, waiting-rooms, stores, warehouses, and other such accommodation; in short, they provide by rail and road all the facilities in the transport sphere on which the public should remember, if some have forgotten, that it has been accustomed to rely over the greater part of a hundred years, and not merely such as, under conditions that may be transient, it has proved immediately profitable for private persons here and there to provide. It is a waste of good intentions to be adding to the weight of social legislation and public obligations if the result be to contribute towards shortening the life of the only kind of transport undertaking where they could have substantial effect. Railways for many years were given legislative protection in return for the onerous public duties they accepted. Nowadays it is all duties and no longer any real protection.

Few seem to have formed concrete ideas of the transformation that must occur in the present conditions of such business as the commercial haulier's if he had to try to meet the obligations that fall on public transport. In fact both the commercial haulier and the trader using his own lorry depend, as many of them would admit, on the maintenance of public transport to deal with the "skim milk" of traffic while they take what is for them the "cream." They

might not put it quite in that way but they would certainly decline to accept, and at anything like their present costs would be unable to discharge, the responsibilities which rest on public transport. It is plain, I think, that without the stand-by of public transport the goods traffic of the country could not be carried on. It is equally plain that in the case of passenger traffic public transport is indispensable.

#### Sufficient Business or a Subsidy

What then are the requirements for the continuance of public transport? The blunt conclusion cannot be avoided that either it must have sufficient business to be self-supporting, or it must be subsidised. Subsidies have never been advocated by the railway companies. If more than mere temporary expedients, they are unstable and inherently unsound because they connote some economic disequilibrium; in Ireland, for instance, at the present time their effect would be to perpetuate the excess of transport facilities over traffic needs. Before taking any decision that it was impracticable, on other grounds, to secure for public transport enough business to make it self-supporting, it should be appreciated that such a decision must inevitably lead to subsidies. It should be realised also that the cost of any subsidies must be added to the "apparent" cost of other transport in order to determine what the real cost of the latter is. Ireland is not so rich a country that it can afford, for long, to overlook the real cost of any of its more important services.

#### Services Cannot be Further Cut

It may be asked "why not adjust facilities to traffic needs by reducing public transport services?" There may, or may not, be scope for reduction in road services; in rail services, on this company's system, there is little or none. Any substantial reduction in our rail services, beyond what imperative necessity has forced on us in recent years, would mean a reduction in receipts greater than any consequent reduction in expenses. In other words, it would mean an increased loss and only bring the day nearer when the public would have no railway services at all. Those who realise what a high proportion of all expenses the non-variable costs on a railway inevitably represent will appreciate why this must be so. If the system by rail and road is to be maintained, a certain bed-rock minimum of business is essential to keep it self-supporting.

These observations must not be taken as indicating railway—rather than road—mindedness. Within any particular system of public transport, whether large or small, the proper allocation of traffic between road and rail is a question, not of a rail or a road predisposition, but of plain, if not always simple, economics. Public needs have to be met in the cheapest manner which will prove in the long run, and under varying conditions, economically stable. No prudent man would arrive at any decision until all the relevant facts had been both determined and understood. We shall, in the future, hear less I hope of the unthinking charge so often made against the railway companies that they are to blame for their present state because they did not rush to multiply services on the roads, while trying to maintain self-supporting services on the rail as well, with no visible increase in the public's ability to pay for both. If, as we certainly agree, the true cause of the present crisis is an excess of facilities over traffic needs, the railway companies would only have been adding aggravation to the crisis by following the course which their critics recommended. It is coming to be understood that little in the present difficulties of the railway companies is of their own making, and that little of the possible solution lies in their hands. Until it is recognised that the real price is not yet being paid for the convenience and flexibility of private road transport, whether in trader's or haulier's lorry, public transport must remain enfeebled. It is no criticism to describe private transport as parasitic on public transport at the existing level of business, nor any error to apply that description at the present time at least as much to the trader's own lorry as to the lorry of the commercial haulier.

The situation in Ireland is being examined, you may be sure, during the inquiries now proceeding, with the objective purpose of securing at last, after so many abortive attempts,

a stable system. The proprietors of public transport undertakings may reasonably expect that as opinion becomes better informed it will recognise a value in their property much nearer its real worth to the public than has been the case while new and flexible, but far less comprehensive and dependable, forms of transport have been multiplying to excess. Public opinion will not under-rate, once it realises, the element of dependability in rail services. Experience has shown road services to be vulnerable to adverse weather. They rely on fuel supplies from distant sources, which, under international conditions that are not inconceivable, might be difficult, if not impossible, and certainly expensive, to obtain. For the railways, on the contrary, there would always be enough of our own fuel at least to keep steam locomotives at work and enough of our own power resources to operate electrical trains. It is in this connection of interest to report that by arrangement with the Turf Development Board we are about to conduct experiments on the extraction of power from peat for use in steam locomotives. Nor will the public under-estimate the accumulating costs and the accumulating errors on our roads were the 30 million passengers, 4 million tons of goods, and 2½ million head of livestock carried on the Irish railways in 1938 now to be launched broadcast on the highways. Provided the solution of the transport problem is based on a soundly balanced relation between what the country needs and what it can prudently afford having regard to all its other commitments, it is right to expect that the railway system, which, it must be remembered, has proved adequate to develop and sustain not the least durable parts of our economic structure, will regain a fairer measure of popular support.

Having dealt with these matters at some length because of their immediate importance to our future, I will not detain you with more than a brief summary of the results of working for the year just past. For that purpose I will, with your permission, take the accounts as read.

#### Miscellaneous and Road Receipts Increase

Gross railway receipts show a slight decrease of £8,340. Passenger train traffic produced £3,176 less, goods train traffic £6,364 less, notwithstanding very substantial new business from the cement works at Drogheda. This confirms my previous statement that the continuous decline in other goods traffic constitutes our major difficulty. There was an increase of £1,200 in miscellaneous railway receipts. Road receipts show a welcome increase of £6,583, but this was more than offset by reductions in hotel and refreshment department earnings and in general interest.

Total railway expenditure increased by £60,397 most of which is accounted for by an increase of £50,894 in the provision for renewals. As proprietors are aware, provisions under this head were made for the years 1931 to 1937 on the basis of pre-war and not actual costs. The purpose was to ease the position for the proprietors under conditions which it was hoped would prove to be of a temporary nature. The emergency, however, has not proved temporary and as the effect was to deplete the renewal funds which had to bear the difference between the reduced provision for renewals and their actual cost, the position had to be carefully reviewed. Our cash resources were being rapidly depleted and have now fallen so low that we had no alternative, after consulting our auditors, but to restore the basis of the renewal provisions to what it always used to be and, prudently, always should be. Increases in contract prices for locomotive coal, maintenance materials, and other such costs outside our control, involved an increase in expenditure of £20,600, which we were able only partly to offset by what may be described as extreme economies to the extent of £11,159.

#### "Fast Approaching Insolvency"

The final result of the year's working is that the Net Income was down by £68,872. After providing for fixed charges and debenture interest there remains a deficit of £60,570, which is reduced, by utilising our meagre remaining reserves, to the debit balance to be carried forward of £34,269. The position thus created is one of fast approach-

ing insolvency. At previous annual meetings you have been informed that such a position would inevitably be reached if early and adequate steps were not taken to give public transport an Irish version of what has been well described in effective terms as a "square deal." We have had to contend for a long time with a widely held but most erroneous supposition that railway companies were immensely rich and thus could exist on their own fat for years to come. I am glad to say, however, that the two Governments, the Parliamentary Committee in Northern Ireland, and the tribunal of inquiry in Eire, are under no delusion as to the desperate financial position to which public transport has been reduced. It is to them in the first place, and ultimately to the public itself, that we now look for such an effective "square deal" as will free us from the grinding anxiety of recent years and enable us to render, with increasing efficiency and progressiveness, those services which, I think it is recognised if not always admitted, must for long remain an integral part of our economic mechanism.

Before concluding I must pay tribute to the staff for their close attention to the interests of the company during the past year. They are fully conscious of the critical position of the company, but they have striven successfully, against difficulties of every kind, to maintain our services at an efficient level so long as possible, knowing from experience in their daily duties just what the community would suffer should those services have to cease.

The report and accounts were adopted.

### Belfast & County Down Railway Company

The annual general meeting of the Belfast & County Down Railway Company was held in Belfast on February 23, Mr. James Hurst, Chairman of the company, presiding.

The Chairman, in moving the adoption of the report and accounts, referred to the work of the Select Committee which was preparing a report on the transport situation, and stated that the railway position in the interim period of waiting for the committee's report had become so serious that the companies had addressed a joint letter to their Prime Minister, urging the necessity of a definite decision with the least possible delay. The Act of 1935 had failed in its object, and the position of the company today was infinitely more serious than prior to its passing.

Referring to the working results, the Chairman said that gross receipts from all sources had decreased by £6,942, to £171,972, accounted for by the general falling-off in traffic. Total expenditure, at £173,323, was up by £2,668. Net income was £4,324, or £10,518 less than in 1937, and after bringing in the balance of £1,034 from 1937 they were left with £5,358; it had therefore been necessary to transfer £10,217 to revenue from the settlement of claims compensation account in order to meet fixed charges and interest on the debenture and 4½ per cent. "A" preference stocks.

Passenger numbers and receipts declined in all classes, first class being down by 2,490 and £202, second by 11,298 and £549, and third class by 159,533 and £3,557. Receipts from goods and minerals fell £2,019, and from merchandise over £1,000. The company had had to pay approximately £4,000 more for materials, due to increases in prices. Gross receipts from hotels and refreshment rooms were well maintained, showing a drop of only £80, so that the decrease of £700 in net profits was accounted for by the expenditure of over £600 in repairing, improving, and decorating hotel premises.

The Chairman said that as this was essentially a passenger line, they were confident their position would materially improve provided they had a good summer this year. Many considerations had to enter into any forecast that might be made. The condition of trade in the province had a material effect on transport business, and it was hoped that the improvement prophesied by some of their leading men might be fully realised and reflected in the finances of the railway.

The report and accounts were adopted.

## STAFF AND LABOUR MATTERS

### Railway Staff National Tribunal Decision No. 5

The Decision (No. 5, dated February 28, 1939) of the Tribunal, on the claims recently presented by the National Union of Railwaymen, the Associated Society of Locomotive Engineers and Firemen, and the Railway Clerks' Association, has now been published by the Special Joint Committee on Machinery of Negotiation for Railway Staff, Fielden House, Great College Street, S.W.1, price 5s.

As in previous decisions, the tribunal prefaces its decision on the claims by stressing certain of the facts and circumstances which seem to it of especial significance. The claims are classified into four categories: (1) increased rates of wages and salaries; (2) increase in annual holidays with pay; (3) reduction in standard hours; and (4) changes in conditions of working or payment in special cases. After commenting on the cost, the Decision states that the claims put forward need obviously to be considered in relation to the financial position and prospects of the railways. Here, however, there is an important distinction between the different claims. Some of them ask for advances in the general standard rates of pay for large sections of the staff, or an extension of such privileges as the grant of holidays with pay. These, beside involving a very large expenditure, are in the nature of a general improvement of the standards of remuneration. Such claims must necessarily be affected to a very important extent by the financial position and prospects of the railways at the time they are put forward. To deny this would be to abandon the assumptions upon which the previous awards both of the National Wages Board and of this tribunal have been made, and the basis upon which negotiations have taken place, from the time of the National Agreements to the present time.

#### Conditions of Work

Other claims, however, relate to the conditions upon which certain special kinds of work are arranged, and the payment due in relation to such work. As the tribunal said in relation to Decision No. 3: "There may be certain conditions established in favour of the employees which, in the light of experience, may be shown to be of less advantage to them than is proportionate to their cost or inconvenience to the companies. The converse case may also occur in which conditions established in favour of the companies may prove irksome to the men to an extent which is out of proportion to any resulting economy or convenience." In such cases modifications may be very little, or in some cases not at all, affected by the general financial position. In other words a modification giving a great economy and only in

a slight degree irksome might be justified even in a time of prosperity, and the termination of a provision that had proved extremely irksome and had given only a small economy might be justified even in a time of depression. Even in claims of this kind the financial position would doubtless be in the mind of any tribunal dealing with the case, but it would occupy a relatively unimportant place among the different relevant considerations.

#### Financial Position of Railways

The principal claims now put forward, however, clearly fall within the first of the above categories. They involve large sums and are in the nature of an improvement in the general standard of remuneration. The Decision, therefore, begins with some reference to the financial position. A full review of the financial fortunes of the railways for many years past having been given in the prefaces to the earlier Decisions of the tribunal, it was unnecessary to cover the same ground again and the present Decision does little more than note the developments since the last general review in August, 1937 (Decision No. 3). In August, 1937, the tribunal saw that the net revenue of the railways had been steadily increasing for some years, and it was rightly anticipated that, as 1936 had shown a large advance upon 1935, so 1937 would upon 1936. The recovery from the previous low level was at that time very striking; the rating relief was proving greater than had previously been anticipated; and there was a prospect of a still greater increase in revenue through the authorisation of increased charges by the Railway Rates Tribunal.

In these circumstances the tribunal took as the basis of its finding, not merely the realised improvement, but the still better prospects for the year from August, 1937, onwards, as a result of the different factors just mentioned. It was on this basis, and this only, that the tribunal felt justified in not only terminating all the remaining deductions from earnings, and in restoring the standard rates for night duty, night overtime, and Sunday duty to those in operation before Decision 119 of the National Wages Board of March, 1931 (at an estimated annual cost of about £2.3 millions a year beyond the cost of the partial remission in 1936), but in also making certain further concessions amounting to about another £600,000. This was in spite of the fact that the actual financial position was (on the basis of realised results as distinct from prospects) still worse than when the National Wages Board thought it so serious as to award relief to the companies at the rate of £3.6 millions per annum, which, with the application of

corresponding arrangements to staff not covered by the board, gave a total relief of £4.5 millions per annum.

Even on this basis of prospects, as distinct from results, the tribunal felt that the financial position did not justify any further concessions than it then recommended as to either the minimum rate, or increased holidays, or reduction in hours for the Clerical staff, in respect of all of which claims had been presented. In fact, however, the estimate of the prospects upon which the Decision was based has not been realised. The total traffic receipts for 1938 were £6,831,000 less than in 1937, and receipts from all sources were £7,710,000 less. Even this is not the worst, for expenditure increased in 1938 by £1,208,000, making the decline in net revenue £8,918,000. Moreover, if the tribunal again adopted the basis, which was before so favourable to the staff, of prospects rather than realised results, the position would be even worse, for the movement is now not upwards, but downwards.

While the present financial position and prospects, and the principles implicit in earlier Decisions, must obviously be kept in mind when considering the present claims, it is not meant that a standard once adopted can never be changed, and that a claim rejected at one time can never be approved unless the net revenue of the railways is substantially higher than when it was rejected. This is shown as already indicated by the finding of the tribunal in August, 1937. Nor is it meant that cases of special hardship, or rates which have become relatively lower in relation to general standards in the country through improvements elsewhere, can never be raised unless the financial position of the railways is better than when the current rates were last determined. As wages approximate to, or fall below, the point at which they do not suffice for reasonable human needs, or at which they are worse than the standards generally in existence at the time in trade and industry generally, the case for maintaining or improving the rates in spite of an unsatisfactory financial position becomes stronger. Some recognition of such a principle can be seen in the findings of August, 1937, when some addition was made to the rates of the lowest paid.

#### Large Concessions not possible

Nevertheless, any such change of standards can only be gradual and must bear some relation to changes in standards in other industries. It is not to be expected that a tribunal which, less than two years ago, secured the maximum improvement that then seemed justified, should feel able now to recommend large additional concessions at a time when the financial position and prospects are very much worse.

The Decision sets out the considerations of the tribunal on the actual



claims. The first category mentioned deals with the claims for a 50s. minimum wage; increases for drivers, firemen, and cleaners, and increases for salaried staff. On the claim for a 50s. minimum the Decision states that the tribunal considered with sympathetic attention the carefully prepared specimen budgets presented and the arguments based upon it. It is, however, very difficult to form an opinion solely upon evidence of this character. But some help is to be found in considering what recognition of such basic needs is reflected in the minimum rates which are, in fact, operative in trade and industry generally, and especially, though not solely, in the minimum rates prescribed after investigation by a public authority.

With this in mind the tribunal paid particular attention to the important evidence produced as to rates prescribed, and applicable to adult males, in the trades covered by the Trade Boards Acts. It further supplemented this evidence by examining information prepared at their request by the Ministry of Labour as to the minimum rates in operation in a wide range of other trades and industries of different types, including road transport. The rates, of course, vary very greatly. They tend to be lower in industries very largely dependent upon export (cotton goods being the most notable example), than in those which are protected or sheltered occupations. The railway industry, though not directly depending upon export, is to a considerable extent affected by it and is also subject to acute competition from road transport and is, therefore, in a different position from public employment, for example. It is also necessary to take into account all the attendant conditions of employment, regularity of work and any privileges as to provision of uniform, facilities for cheap travelling, annual holidays, &c.

#### Lowest Rates Merit Revision

In some cases considerations of this kind may offset, in whole or in part, the superiority of the rates prevalent in other occupations. Nevertheless, after a careful examination of the minimum rates in a large range of different trades and industries, and after making full allowance for the special factors referred to, the tribunal is of the opinion that a strong case has been presented for making an increase upon the lowest rates a first claim as soon as the financial position makes any substantial concession possible. It has, however, with regret come to the conclusion that a general improvement, involving necessarily a great extra annual cost, cannot be properly recommended at a time when traffic receipts, and still more net earnings, have fallen so greatly, and when the movement is still downwards.

With regard to the claim for increases for drivers, firemen, and cleaners, the Decision states that the

rates now in operation are (with a few minor exceptions) those laid down in the National Agreements of 1919 and 1920, the temporary deductions made in 1931 and at other times having been brought to an end by the tribunal's decisions of 1936 and 1937. The question is whether any sufficient ground for a general advance beyond the standards of 1919 is to be found in either a general advance of the national standards or in an increase of the strain and responsibility involved by railway developments since that date. It was on the latter basis that the claim was presented. It was argued that trains have been speeded up, that modern engines are heavier and more powerful and that, just as reduced rates have been agreed for such a new type as the Sentinel, so increased rates should be granted in view of the new and heavier type of engine now so commonly in use. It was argued on the other side that recent inventions and developments have in many respects reduced the strain of the work and may justly be regarded as compensating for any extra strain resulting from other changes. It was also argued that in the case of the fastest new trains the system of payment on a mileage basis gives adequate compensation for any special strain involved in those particular cases. The tribunal has carefully considered the evidence and arguments of the two sides. It is not, however, convinced that there has been any such net increase in strain and responsibility as to justify a general increase in remuneration.

#### Clerical Rates up to Average

On the claim for increases for salaried staff the Decision states that no evidence was presented to show that the rates and conditions for the railway clerical staff compared unfavourably with those applicable generally for similar clerical work in the country; and the tribunal was not convinced of the existence of any such increased strain and responsibility as would justify a general improvement of the kind asked for. The tribunal also noted that since the rates were fixed in relation to a cost of living index figure of 225, i.e., 125 per cent. above pre-war, with a provision that no reduction should be made when the index fell below this point, and since the index now stands at 155, i.e., 55 per cent. above pre-war, the real earnings of the salaried staff (so far as they can be properly assessed from the index) have improved by 45 per cent. The tribunal has also considered in this connection a somewhat different claim in respect of a small number of R.C.H. numbertaking staff which would involve an annual cost of £8,000 (included in the above totals); it was not convinced by the arguments presented in favour of this case.

The second category covers the claims of the three unions in regard to holidays with pay. On these the De-

cision states that the tribunal has already considered the question of increased holidays in 1936 and 1937. It recognised that in certain special cases (such as when the increased Sunday excursion traffic involves almost continuous work throughout the summer) some relief is called for, and made certain minor concessions as to days in lieu when work is required on the two summer bank holidays. Further than that the tribunal did not feel able to go in view of the financial position at the time. The financial position is now much worse. On the other hand, it was argued that the Holidays with Pay Act of last year and recent extensions in the grant of holidays with pay indicate a change in national standards which should be taken into account. The tribunal recognises that a change in national standards in respect of holidays is now taking place; and if the present movement continues the case for some increase in holidays on the railways would merit a place among those to be presented when the financial position permits any general improvement. In general, however, the new movement has not yet gone beyond the grant of a period of holidays with pay which is equal to that already in operation on the railways. Having regard to this, and in view of the financial position, the tribunal does not consider that an increase of the present period is now practicable.

The third category deals with the Railway Clerks' Association's claim for a 40-hour week and the decision states that many clerks work much less than 48 hours, some for as short a period as 36 hours. These differences are the result of the conditions of the work; and clerks as a whole are in this respect in a more favourable position than the conciliation grades. Though the tribunal recognises that the differences between different groups of clerks may cause a sense of hardship, and also that in the country as a whole hours for clerical staff tend to be shorter than those of manual workers, it feels unable, after considering all the factors—including present standards in the country generally and the advantages of many of the railway clerks in this respect as well as the unfavourable financial situation—to recommend any change.

#### Spreadover Turns

The fourth category covers the claims for abolition of spreadover turns (N.U.R. and A.S.L.E.F.); abolition of extended rosters (N.U.R. and A.S.L.E.F.); minimum payment for Sunday duty (N.U.R.); minimum payment for Sunday duty (A.S.L.E.F.); short turns of duty (N.U.R.); and extra payment for night duty (R.C.A.). Before dealing with the actual claims in this category the tribunal stated that in general the claims in this category reflect a desire to return to the *status quo* of the National Agreements of 1919, and for a cancellation of the modifications since made. The modi-

fications in question differ to some extent from the Decisions which were clearly intended to be temporary and to be related to changes in the financial situation (such as the deductions from earnings prescribed in National Wages Board Decision No. 119 which have now ended). This difference is perhaps best indicated by a quotation from National Wages Board Decision No. 2, of 1922, which made the first important modifications of the kind.

#### Inflexibility of Eight-Hour Day

"The eight-hour day," said the board, "was instituted on railways in February, 1919, by an order of the Government given in December, 1918, during the period of Government control, and its application was not the subject of that minute examination and discussion between the companies and the employees which so considerable an innovation deserved and would normally receive. Its operation has been marked by an inflexibility which as regards some grades of employees the conditions of railway service do not easily support. In the view of the board the evidence submitted sufficiently establishes this point. The question therefore resolves itself into one of how the necessary degree of flexibility can be introduced."

Two things follow from such a conception of the purpose of modifications of this kind. Since they are related to the intrinsic reasonableness of particular arrangements, rather than to the question whether the finances as a whole indicate a general improvement or worsening of standards, they can be considered on their merits with little consideration of the general financial position. At the same time there is no such presumption in favour of a return to the *status quo* as rightly attaches to any claim for standard rates of pay or overtime rates. In other words the principle to apply is the one enunciated by the tribunal in connection with Decision No. 3: "There may be certain conditions established in favour of the employees which, in the light of experience, may be shown to be of less advantage to them than is proportionate to their cost or inconvenience to the companies. The converse case may also occur in which conditions established in favour of the companies may prove irksome to the men to an extent which is out of proportion to any resulting economy or convenience." While, therefore, the general financial position at the time must always have some influence upon any tribunal considering claims upon either side, the tribunal will consider the claims now made within this category without feeling that, because the financial position is obviously an obstacle to any general improvement, no modification should be made in a particular arrangement if it is patently unreasonable.

On the other hand, the consideration which moved the tribunal in 1936, as again in 1937, in spite of a financial situation which would in itself scarcely have supported the findings, to reduce

and then terminate the temporary deductions does not apply. This was expressed in connection with the former Decision in these words: "We are impressed by the fact that deductions, intended to be temporary—though no term was fixed—from earnings based on the standard rates have now been in operation for over five years. We feel that, other things equal, the case for returning to the standard rates becomes stronger with time." But time alone does not increase the strength of the case for the modification, not of standard rates in the ordinary sense, but of an application of a general principle which experience may have shown to be unduly wasteful and unreasonable. It is therefore on their intrinsic merits, and on the principle enunciated in 1937, that the tribunal has considered the claims.

On the claim for abolition of spread-over the tribunal refers to N.W.B. Decision No. 2 under which spreadovers were first introduced, and to Decision No. 119 which enlarged the freedom of action of the companies. The Decision goes on to say that in any case the present tribunal is just as clearly of the opinion that there are cases in which spreadover would be unjustifiable as that there are others in which it is required. This indeed in extreme cases is not contested, and there are many instances in which a possible form of spreadover would give some economy which the companies would not, and do not, require. The tribunal considers that spreadover working can reasonably be arranged up to ten hours in cases where the men can be booked off and free from duty for the period in excess of the rostered day. In cases where the difficulties of arranging the work are such as to make a spreadover beyond ten hours necessary as the only alternative to an unjustifiable waste of time and expenditure, it may be extended to twelve hours unless the hardship or inconvenience to the staff is so great as to outweigh the economy to be gained. The tribunal's finding is necessarily in terms that do not admit of an automatic application. It is, however, of the opinion that in these cases accommodation might well be found between the parties in the light of the above observations.

#### Extended Roster Decision Upheld

On the claim for abolition of extended rosters the Decision states that the tribunal in 1937 (Decision No. 3) found against the same claim as is now presented, when it re-affirmed its previous Decision (No. 2) which remarked that such cases of unnecessary inconvenience as might have occurred did not in its opinion justify a cancellation of the Decisions permitting rostering beyond the 8 hours which was "necessary to the efficient working of such an industry as the railways and, when reasonably worked with due regard to the necessity of avoiding preventable overtime, should not give rise to legitimate complaint." The tribunal

must, for the reasons given, adhere to this Decision.

On the claim of the National Union of Railwaymen in regard to the minimum payment for Sunday duty the tribunal is unable to find in favour of the claim as presented. It would mean that a man brought on for two very short turns of duty would receive 8 hours at the Sunday rate, *i.e.*, in the conciliation grades, 12 hours' ordinary pay. At the same time the tribunal feels that the interruption of a Sunday's rest which is involved in a short turn of duty (necessitating travelling from and to home) is not adequately compensated for by the present provision in the case of conciliation grades (other than trainmen) of 2 hours at the Sunday rate, *i.e.*, 3 hours' ordinary pay. While, therefore, leaving all other provisions as to Sunday work as they are at present, the tribunal finds in favour of a minimum total payment of 3 hours at the Sunday rate, *i.e.*,  $4\frac{1}{2}$  hours ordinary pay in the case of the conciliation grades (other than trainmen) who book on duty on Sunday. This finding does not in any way affect the present position of a man who has two turns or is otherwise entitled to as much as 3 hours at Sunday rate in respect of any work he does on a given Sunday.

#### Sunday Duty

With regard to the claim of the Associated Society of Locomotive Engineers & Firemen in regard to the minimum payment for Sunday duty, the tribunal states that a claim as to Sunday signing was made by the A.S.L.E.F. in 1937 and was rejected by the tribunal (Decision No. 3), partly because of the cost involved and partly because the grades in question are in a substantially better position than the other conciliation grades. These reasons remain, the first being stronger than before (both because the claim is now more extensive and the financial situation is worse) and the second being only very slightly modified by the slight concession which the tribunal is now making to conciliation grades who are not trainmen.

On the claim of the National Union of Railwaymen that the short turn of duty shall be on Saturday morning, the decision states that one special case requires mention. Numbers of men in the permanent way staff are, in certain circumstances, booked to work their short turn on a day other than Saturday in connection with the change over from day to night turns of duty. This form of rostering does certainly result in avoidable hardship and the tribunal was glad to receive a definite undertaking on behalf of the companies that the practice will be discontinued forthwith. In the other cases, however, that is of short turns on Saturday afternoons, or in a number of instances on days other than Saturday, the practice seems to be necessitated by the conditions of the business carried on by the railways,

and the tribunal cannot give a finding which would put an end to it.

With regard to the claim of the Railway Clerks' Association for extra payment for night duty between 10.0 p.m. and 4.0 a.m., the Decision states that the tribunal has given special and sympathetic consideration to the arguments put before it in support of this claim. It recognises that clerks may do a great deal of night work for a considerable part of the year—so considerable that the work can scarcely be justly termed merely "occasional"—without qualifying for the one night off in 10 or even the one night off in 15. It recognises also that it is very customary in trade and industry generally for some enhanced payment to be made for such work. After very careful consideration, however, it has felt unable to recommend such an increased rate for the salaried staff at a time when the financial position is as it has been described above. It is therefore finding against the claim.

#### Findings of Tribunal

The findings of the tribunal are summarised as follows:

#### I

##### CLAIM BY

##### National Union of Railwaymen

*That all staff in salaried and conciliation grades shall be paid a minimum of four hours' pay at Sunday rates for each time of signing on duty on Sundays.*

Every employee required to come on duty on Sunday who is not at present entitled to a minimum total payment of as much as three hours at the Sun-

day rate shall be entitled to that minimum.

#### II

##### CLAIM BY

##### National Union of Railwaymen

*That the arrangement for spread-over working provided for in Clause 27, Section IV (c) of National Wages Board Decision No. 2, dated January 24, 1922, and Clause 99 of National Wages Board Decision No. 119, dated March 5, 1931, be terminated.*

Spreadover may be arranged up to ten hours in cases where the men can be booked off and free from duty for the period in excess of the rostered day; and it may be extended to twelve hours in cases where the difficulties of arranging the work are such as to make a spreadover beyond ten hours necessary as the only alternative to an unjustifiable waste of time and expenditure, unless the hardship or inconvenience to the staff is so great as to outweigh the economy to be gained.

#### III

The Decision finds against all the other claims presented.

#### Post Office Engineers' Wages

According to an announcement made by the General Post Office, agreement has been reached between the Postmaster General and the Post Office Engineering Union on the question of the union's claim for higher wages for the main rank and file grades of the Post Office Engineering Department. The scale for skilled workmen, class I, employed in London has been increased by 5s. at the minimum and 6s. at the maximum; in the provinces

the increases are 4s. 6d. and 5s. 6d. The maxima for skilled workmen, class II, and unestablished skilled workmen have been increased by 5s. and 4s. 6d. in London and the provinces respectively. The separate range of pay for unestablished skilled workmen has been abolished and these men will in future be paid on the same scale as skilled workmen, class II. Labourers have received an increase at their maximum of 4s.

The majority of the men will receive increases back-dated to October 1, 1938; but details of the terms of assimilation to the new scales are still the subject of discussion with the union. The number of men affected is about 38,000; and the estimated cost, including pension liability, of the increases, when fully operative, will be about £520,000. The question of the rates of pay of the remaining rank and file grades in the engineering department and of the stores department grades, for whom the union have also claimed increases, is still under consideration.

#### Road Haulage Wages Board

The Minister of Labour has constituted and established the Road Haulage Central Wages Board for Great Britain. The first meeting of the board has been fixed for March 8. The three independent members of the board are Sir Richard Redmayne, K.C.B., who was the independent chairman of the National Joint Conciliation Board; Mr. V. R. Aronson, M.A., B.C.L.; and Professor D. T. Jack, M.A., of Durham University.

### Royal Engineers Transportation Units, Supplementary Reserve

Colonel the Lord Stamp, G.C.B., G.B.E., presided at the eleventh annual dinner of the Royal Engineers Transportation Units, Supplementary Reserve, held at the Abercorn Rooms, on Friday, February 24. There were no speeches. Those present included:—

Anderson, J. H., Major R.E.; Baister, S. L., Major; Barnett, C. H., Capt., R.E.; Bellamy, G. S., Major, R.E. (S.R.); Bird, H. T., Capt., R.E. (S.R.); Blundell, J., Capt., R.E. (S.R.); Blakey, W. E., Bvt.-Colonel, M.M.; Bolland, R. B. W., 2/Lieut., R.E. (S.R.); Brady, N. E. V., Capt., R.E. (S.R.); Buchanan, P. D. G., Capt., R.E.; Bunting, T. B., Mr.; Byers, H. B., 2/Lieut., R.E. (S.R.); Calvert, W. T., Lieut., R.E.; Cantrell, A. H., Capt., R.E. (S.R.); Carpinel, R., Colonel, O.B.E.; Chester, A. B., Lt.-Colonel, R.E. (S.R.); Constant, M. E., 2/Lieut., R.E. (S.R.); Cobb, R. L. P., 2/Lieut., R.E. (S.R.); Cookson, E. C., Major, R.E. (S.R.); Cook, K. D., 2/Lieut., R.E. (S.R.); Cooke, P., Mr.; Cornfoot, G. D., Lieut., R.E. (S.R.); Cornfoot, S. J., 2/Lieut., R.E. (S.R.); Clarke, A. C., Lieut., R.E. (S.R.); Davies, E. T., Major, M.C.; Denning, J. V., Lt.-Colonel, M.C., R.E. (S.R.); Edwards, C. W., 2/Lieut., R.E. (S.R.); Edwards, R. H., Major, R.E. (S.R.); Evans, H. D., Lieut., R.E. (S.R.).

Field, C. M., Lieut., R.E. (S.R.); Fletcher, D. M., 2/Lieut., R.E. (S.R.); Forster, W. B., 2/Lieut., R.E. (S.R.); Garraway, R. H. R., Mr.; Gentry, J. S. B., Capt., R.E. (S.R.); Greig, J. P. S., Colonel; Gribble, D. S., Major, R.E. (S.R.); Gow, J. A., Lieut., R.E. (S.R.); Haworth,

T., Mr.; Hobson, T., 2/Lieut., R.E. (S.R.); Holland, F., Major; Hopkins, H. L., Capt., R.E. (S.R.); Hughes, D. G., Lieut., R.E.; Illingworth, V. R., Capt., R.E. (S.R.); Ivimey, F. J., 2/Lieut., R.E. (S.R.).

Kay, J. A., Mr.; Kempton, N. E., 2/Lieut., R.E. (S.R.); Knotts, L. J. M., Major, R.E. (S.R.); Lemon, G. A., Capt., R.E. (S.R.); Lennard, E. H., Mr.; Letch, R., Mr.; Lewis, E. A., Capt., R.E. (S.R.); Long, E. G., Lieut., R.E. (S.R.); Mackillop, I. L. H., Capt., R.E.; Mangles, D. R., 2/Lieut., R.E. (S.R.); Manton, L., Colonel, D.S.O., O.B.E.; Matheson, E. J. M., Lieut., R.E. (S.R.); McMullen, D. J., Lt.-Colonel, D.S.O., O.B.E., R.E.; Miller, W. B. S., 2/Lieut., R.E. (S.R.); Montague-Jones, R. M., Capt., R.E.; Moss, G. H. B., Capt., R.E.; Neale, H. G., Capt., R.E. (S.R.); Oram, R. B., Capt., R.E. (S.R.).

Parkes, E. L., Major, R.E.; Parker, C. P., Major, M.C., R.E. (S.R.); Payne, A. C. J., Capt., M.M., R.E. (S.R.); Payne, J. S., Major, R.E.; Petty, F. H., Lieut., R.E. (S.R.); Phizackerley, C., Mr.; Phizackerley, P. N., 2/Lieut., R.E. (S.R.); Potter, F. R., Lt.-Colonel; Pottle, H. G., Major, M.C., R.E.; Powley, H. M., 2/Lieut., R.E. (S.R.); Price, J. R. R., 2/Lieut., R.E. (S.R.); Quartermaine, A. S., Major, M.C.; Ratter, J., Mr.; Rice, C. R. L., Lieut., R.E. (S.R.); Riddell-Webster, T. S., Major-General, D.S.O.; Rigby, G., Lieut., R.E. (S.R.); Rigby, H. J. M., 2/Lieut., R.E. (S.R.); Robertson, J. R. H., Lieut., R.E.; Robertson, V. A. M., Lt.-Colonel; Russell, G. N., Major, R.E.; Russell, F. T., Lieut., R.E. (S.R.); Rutt, A. J. F., Lieut., R.E. (S.R.).

Sadler, J. R., Lt.-Colonel, R.E. (S.R.); Sande-

man, W. Y., Capt.; Scott, J., Bvt.-Lt.-Colonel; Scott, W. J., Capt., R.E. (S.R.); Short, H. A., Colonel, M.C.; Soper, K. J., Capt., R.E. (S.R.); Spillard, F. V., Lieut., R.E. (S.R.); Stamp, Colonel The Lord, G.C.B., G.B.E.; Stanley, F. C. C., Capt.; Stenhouse, D. R., Lieut., R.E.; Stevens, S., Lieut., R.E. (S.R.); Strouts, B.M., Lieut., R.E. (S.R.); Szlumper, G. S., Colonel, C.B.E., T.D.; Thompson, R., Major, R.E. (S.R.); Trickett, H. C. L., 2/Lieut., R.E. (S.R.); Tyrrell, W., Lieut., R.E.; Tyrrell, W. G., Colonel, D.S.O.; Tyrwhitt, S. E., Major; Venner, W. H., Mr.; Venning, W. K., Lt.-General, C.B., C.M.G., C.B.E., M.C.; Waghorn, R. D., Lt.-Colonel, R.E.; Walker, R. J., Capt., R.E.; Wheeler, R. W., 2/Lieut., R.E. (S.R.); Wheeler, W. H. B., Capt., R.E.; Wood, Sir William V.; Wooll, C. H., 2/Lieut., R.E. (S.R.); Yorath, K. L., Major, R.E. (S.R.).

**VICTORIAN RAILWAYS POSTERS.**—Two holiday posters which we have received from the Victorian Government Railways are good examples of this administration's partiality for building up composite designs from a number of photographs. One poster, entitled "The Seaside" presents a number of lively bathing and surf-riding scenes against a blue background on which the silhouette of a yacht is sketched in white. Another poster advertises the Mount Buffalo National Park, with scenes of tennis, riding, climbing, and other sports superimposed on a panoramic view of the area.



## Liverpool Street—Shenfield Electrification

### Alteration of services necessitated by engineering works

On February 27, Mr. H. H. Mauldin, Superintendent, Eastern Section, Southern Area, L.N.E.R. (who from March 4 assumes the Divisional General Managership of the L.N.E.R. Southern Area), gave an interview to the Press on the subject of the electrification, now in progress, of the Liverpool Street—Shenfield suburban lines of the former Great Eastern Railway. He stated that, from March 6 it would be necessary to re-time certain trains, and cancel others on account of engineering work necessitated by the electrification schemes. For example, the 8.20 a.m. from Newbury Park (8.26 a.m. from Ilford) would start 4 min. earlier and arrive at Liverpool Street 3 min. earlier, and the 8.42 a.m. non-stop from Ilford to Liverpool Street would start 6 min. earlier and arrive at Liverpool Street 6 min. earlier. Several other trains would also start two or three minutes earlier, and the 8.47 a.m. from Snaresbrook, and the 9.2 a.m. from Newbury Park (9.8 a.m. from Ilford) would be cancelled. Full particulars were included in a printed pamphlet which was being distributed to the public.

Liverpool Street station was used by 210,000 people every day and the L.N.E.R. was naturally reluctant to modify the train service—admittedly overcrowded during the rush hours—but the company hoped that as the works which were now in progress would eventually result in an increase in the service—to be provided by the latest type of electric train—passengers would be indulgent.

The principal causes of delay at present, said Mr. Mauldin, were speed restrictions of 10 m.p.h. between Stratford (Angel Lane Bridge) and Stratford (Central signal box), where joists were being fixed under the lines in connection with the extension of the Central Line tube; 25 m.p.h. between Ilford and Manor Park, where a flyover viaduct was being built to enable the local lines to cross the through lines without blocking them; and 10 m.p.h. where excavations were being made beneath the line between Seven Kings and Ilford for the construction of a new sewer. With regard to the future, the lowering of the lines under some 25 bridges to allow sufficient clearance for electric overhead equipment would have to be taken in hand later, as would also the alteration to track at Bethnal Green, and between Bow Junction and Stratford. There was also the reconstruction of bridges at Old Ford Road and Bethnal Green, and the remodelling of the permanent way at Liverpool Street station. These works would naturally interfere with the train working, but every effort would be made so as to entail the minimum inconvenience and delay to passenger services.

The cost of the engineering works in connection with the electrification scheme was about £1½ million. The scheme provided for the equipment,

with overhead current lines, of four tracks between Liverpool Street and Gidea Park (a distance of 14 miles), two tracks between Gidea Park and Shenfield (6½ miles), and two tracks between Fenchurch Street and Bow Junction (3½ miles). Liverpool Street station was to be partly remodelled, and three large bridges immediately outside the station carrying Primrose Street, Worship Street, and Shoreditch High Street over the railway were to be reconstructed. Between Bow and Stratford an additional line, necessitating the widening of 10 bridges and the construction of heavy retaining walls, was being provided on the south side of the railway. At Stratford station the extension of the Central Line tube would come to the surface, and there would be an interchange station at platform level. Maryland Point, Forest Gate, and Manor Park stations were also being partly reconstructed, and large sheds would be built immediately beyond Ilford station for the housing and overhaul of the new electric trains; a new station named Crowlands was to be provided between Chadwell Heath and Romford.

The present steam service into Liverpool Street station was the most intensive in the world. An average railway train had about 400 to 500 seats, but there were suburban trains using Liver-

pool Street station with more than 1,000 seats, and the average number of seats was as high as 848. A total of 1,300 trains ran into and out of Liverpool Street station daily, and no fewer than 122 trains were dealt with in a single rush hour. Only one station in the world was used by more passengers—the combined station at Flinders Street, Melbourne.

The following is a list of the train alterations coming into effect on March 6:—

7.31 a.m. Shenfield to Liverpool Street will start at 7.28 a.m. and arrive Liverpool Street three minutes earlier.

8.15 a.m. Goodmayes to Liverpool Street will start at 8.12 a.m. and arrive Liverpool Street three minutes earlier.

8.20 a.m. Newbury Park (8.26 a.m. Ilford) to Liverpool Street will start at 8.16 a.m. and 8.22 a.m. respectively, and arrive Liverpool Street three minutes earlier.

8.30 a.m. Manor Park to Liverpool Street will start from Ilford at 8.23 a.m. and leave Manor Park 8.26 a.m., and arrive Liverpool Street three minutes earlier.

8.42 a.m. Ilford non-stop to Liverpool Street will start at 8.36 a.m. and arrive Liverpool Street six minutes earlier.

8.33 a.m. Chadwell Heath to Liverpool Street will call also at Coborn Road and Bethnal Green and arrive Liverpool Street two minutes later.

8.21 a.m. Buckhurst to Liverpool Street will call also at Snaresbrook, arriving Liverpool Street as at present.

8.18 a.m. Fairlop to Liverpool Street (8.37 a.m. ex Woodford) will call also at Stratford and arrive Liverpool Street as at present.

*The following trains will be withdrawn:—*

8.47 a.m. Snaresbrook to Liverpool Street.

9.2 a.m. Newbury Park (9.8 a.m. Ilford) to Liverpool Street.

5.52 p.m. Woodford to Fenchurch Street.

6.38 p.m. Fenchurch Street to Loughton.

## London (West) Division, S.R., Annual Dinner

The fifteenth annual dinner of the London (West) Division, Southern Railway, was held at the Criterion Restaurant, on Wednesday, February 22, with Mr. J. E. Sharpe, Divisional Superintendent, in the chair. There was an attendance of over 200, and among those present were:—

Mr. Gilbert S. Szlumper, Mr. J. B. Elliot, Mr. E. J. Missenden, Major L. F. Dawes, Lt.-Colonel G. L. Hall, and Messrs. R. M. T. Richards, W. J. Shorter, H. E. O. Wheeler, W. J. England, and W. J. Pape.

Mr. W. H. Townsend, in proposing the toast of the "Directors and Officers" of the company, welcomed the presence of Mr. Szlumper and at the same time wished him all success in his efforts to secure a "square deal" for the railways. A special tribute was, he said, due to the directors and chief officers of the Southern Railway for their foresight twenty years ago in deciding to electrify on a large scale; the company was already reaping the benefit of this policy, and could, in consequence, look forward to a prosperous future.

Mr. Gilbert S. Szlumper, in his reply, thanked the speaker for his tribute, and made appreciative reference to the loyal assistance which he and his officers had received from the staff. He quoted figures which showed that the year 1938 had been an excellent one, in spite of international unrest,

the trade recession, and the fact that comparison was being made with 1937, when traffics were abnormally heavy. London (West) fully deserved its success in winning the Southern Sales League Cup and he congratulated the staff on their splendid team work. He felt confident that the "square deal" campaign was proceeding satisfactorily, and that the railways would obtain considerable benefits.

Mr. W. H. Dabney, in proposing the toast of "The Chairman," referred appreciatively to Mr. Sharpe's flair for fostering the spirit of loyalty, happiness, and good fellowship among his staff, with special emphasis on his personal efforts and encouragement in the Sales League competition. Among other things he mentioned the train-working in the London (West) Division and the fact that punctuality during 1938 showed improvements every month in comparison with 1937.

Mr. Sharpe, in his reply, after saying how honoured they were by the presence of their General Manager, thanked all for their kindness and particularly his own staff for their loyal support; they had won the cup at the first attempt and would strive hard to retain it. A tremendous lot, he said, could be accomplished by politeness, and it was up to them to see that his Division made the top score in this respect also.

## New G.W.R. Hotel at Birmingham

The Great Western Railway is to build at Birmingham (Snow Hill station) a new 177-bedroom hotel. It has been designed to meet Birmingham's long felt needs in view of the city's commercial position in the industrial Midlands.

The hotel will be a six-floor steel-framed structure fronting Colmore Row and extending back some 100 ft. down Snow Hill and Livery Street. It will have fireproof floors and will be faced with natural Portland stone. The hotel will be constructed on the site of the building now used as the divisional offices and restaurant, which will be demolished.

On the ground floor will be situated the hotel reception offices, lounge hall, cocktail bar, and cloak rooms, also a grill room and restaurant and bar in the position of those existing today. On the first floor will be the main public rooms. These will consist of a public dining room, seating over 150, spacious lounge, smoke-room, and three rooms where private meetings may be held, which can be converted into one large private dining room to accommodate 160. There will also be special rooms where commercial concerns can arrange private trade shows and entertain their customers.

The kitchens will be situated on this floor with lifts to all floors to facilitate service of meals in rooms. All the bedrooms will be situated on the remaining five floors. These will provide 29 double rooms and 148 single rooms, and each will have its own private bathroom and lavatory. There will

also be a private suite on each floor. The hotel will be centrally heated throughout and it is proposed to air-condition the main public rooms. There will be a central stairway and lifts to all floors. The main entrance to the hotel will be in Colmore Row, and there will be others from Snow Hill, Livery Street, and direct from the station booking hall forecourt, which will remain in its present position.

The construction of the hotel will not interfere with Snow Hill station itself to any marked extent, but a new six-storey block of buildings, in brick,

will be constructed for the divisional offices. These will extend over the existing cab drive from the hotel down Livery Street and access will be from the booking office forecourt by stairway and lift to all floors. On the opposite side, facing Snow Hill, will be a similar four-storey block of buildings for the hotel and refreshment room staff. There will be a new main entrance and exit for passengers and vehicular traffic from Colmore Row, and others for passengers from Snow Hill and Livery Street.

Work on the new hotel is expected to begin this year, and when completed Snow Hill station will be one of the most imposing in the provinces.



Front elevation of new hotel to be built by the G.W.R. at Snow Hill, Birmingham

## "Square Deal" Exhibition at Waterloo

(See illustration on page 356 and editorial note on page 337)

When on Monday last Mr. Eric Gore-Browne, Deputy Chairman of the Southern Railway, knocked on the door of the green hutment lately erected on the concourse of Waterloo station, and was formally admitted to the exhibition within, satisfaction was accorded to the curiosity among regular users of the station that has been steadily mounting in recent weeks. What in its early days had been an indefinable structure vaguely linked in most minds—as such structures today inevitably are—with something to do with A.R.P., is now given purpose by a scenic frontage representing a goods train, and a large cube emblematic of the "square deal" perched on the roof. Inside, the visitor is guided by a somewhat tortuous route through a series of alcoves, the walls of each bearing composite pictures, diagrams, and other exhibits representing the legislative difficulties with which the railways are faced, and the good work they do for the public and the country in spite of them. The title "Fighting for Freedom" sums up the

theme of the exhibition, which is open to the public until March 11 from 8 a.m. to 9 p.m. on weekdays, and from 10 a.m. to 6 p.m. on Sundays.

Soon after entering the exhibition, the visitor is confronted by portraits of the four general managers concerned in the "square deal" campaign, accompanied by short biographical notices. Nearby, a skeleton hand is seen snatching up a goods train as if it were a toy—"the railways in the grip of the dead hand." One section is historical, displaying a reproduction of the proclamation of opening the Stockton & Darlington Railway, and the Act of June 30, 1845, for a railway from Dunstable to join the London & Birmingham Railway near Leighton Buzzard. On the adjacent wall the Acts of Parliament affecting British railways from 1821-1921 are enumerated, each item linked by a tape with a portrait of the Prime Minister under whom it was passed.

After commiserating with the railways upon the graphical representation of how far short their earnings fall of the

standard revenue, the visitor turns to inspect an artist's impression of the Railway Rates Tribunal in session, looking remarkably like the idea of the Old Bailey entertained by those not privileged to engage the attention of that court. Underneath is the caption: "The railways are 'tried' for wanting to reduce a particular rate so that they may not lose £100 worth of business. All the majesty of the law is invoked. The cost is enormous." Nearby is exhibited a panel suggesting the "square deal" Act the railways would like to see passed this year, in uneasy proximity to a photograph of the goal to which they are heading if nothing is done—the entrance to the Bankruptcy Court. Among other exhibits are pictorial panels representing the part the railways played in the last war, and the technical progress they have made in the last 15 years. Illuminating and sometimes amusing reading is provided by a selection of original letters received by the Railway Companies' Association.

All four railway companies have co-operated in arranging the exhibition, which deserves success for the original and artistic manner in which it presents a plea that must not be allowed to become hackneyed, however much it may be made familiar.

## QUESTIONS IN PARLIAMENT

### Rail and Road Goods Traffic

Mr. Temple Morris (Cardiff, E.—C.), on February 22, asked the Minister of Transport if he could make any statement on the nature of the legislation which would be required to give effect to any rail-road agreement.

Dr. Leslie Burgin (Minister of Transport): I am not yet in a position to make a statement on this matter, which is at present under consideration by the Transport Advisory Council.

Mr. Rostron Duckworth (Manchester, Moss Side—C.), on February 22, asked the Minister of Transport, whether, in any legislation introduced into Parliament to co-ordinate rail and road interworking, he would ensure that the powers of the Traffic Commissioners were not fettered in the direction of permitting new haulage operations when the public interest required them.

Dr. Leslie Burgin: The point to which my hon. friend refers is one which I shall certainly bear in mind.

### S.R. and Lullingstone Aerodrome

Lieut.-Commander R. Fletcher (Nuneaton—Lab.), on February 22, asked the Secretary of State for Air on what date the Southern Railway sought Air Ministry advice as to the surface of the proposed aerodrome site at Lullingstone; when the advice was given; and if it contained any figures showing the mechanical and economic aspects of the use of hard runways.

Captain H. H. Balfour (Under-Secretary of State for Air): The Southern Railway sought the advice of my Department on April 28, 1937, and a reply was sent on June 30, 1937. The answer to the last part of the question is in the negative.

### Oxford Inquest on Platelayer

Mr. Ellis Smith (Stoke—Lab.), asked the Secretary of State for the Home Department if his attention had been directed to the inquest held on the railway platelayer at Oxford on January 2, 1939, and to the observations made by the coroner; why the dead man's representative was not allowed to speak at the inquest; and would he enquire into the matter.

Sir Samuel Hoare (Home Secretary) wrote in reply: At the inquest in question there were representatives of two trade unions. As regards the representative of the union to which the deceased man had belonged, no difficulty arose. As regards the representative of the union to which the driver and fireman of the engine concerned in the accident belonged, the coroner took the view that he ought to restrict himself to questions relating to regulations and technical matters. There would seem, however, to be little, if any, ground for differentiating the positions of two representatives in such a case, and the coroner, with whom I have been in communication,

tells me that in any future case he is prepared to follow the usual practice.

### Accidents at Level Crossings

Mr. A. M. Lyons (Leicester, E.—C.), on February 23, asked the Minister of Transport if he would state the number of accidents on and at level crossings during the year 1938.

Dr. Leslie Burgin: Provisional figures for 1938 show that there were 166 accidents at public road level crossings in which trains were involved. In 140 of these accidents there were no casualties but there were casualties in 26, 17 persons being killed and 28 injured. I am unable to state the number of accidents at level crossings during 1938 involving road vehicles only.

### Castlecary Railway Disaster

Mr. T. Cassells (Dumbartonshire—Lab.), on February 24, asked the Minister of Transport if he was aware that the Report by Colonel Mount on his investigation into the Castlecary railway disaster indicated fault on the part of a signalman; and, as that finding was one by a single individual, was he prepared, having regard to the serious effects upon the signalman in question, to instruct further investigation by an independent tribunal representative of his department, the railway company, and of the workman, in order that complete justice might be afforded.

Dr. Leslie Burgin: I am aware of the findings of this report and have no reason to think that any further investigation is either necessary or desirable.

### Air Raid Precautions

Commander A. Marsden (Chertsey—C.), on February 25, asked the Lord Privy Seal, whether he had considered the cost and efficacy of underground tubular shelters of similar construction to that now being employed by the London Passenger Transport Board for the underground railways, with a view to providing a quick standardised method of deep shelter, applicable alike to the protection of the public and to the needs of industrial works, factories, shops, and offices.

Sir John Anderson (Lord Privy Seal): All practical suggestions for providing public shelters are at present under examination, and my hon. and gallant friend's suggestion will be borne in mind.

### Rail and Road Transport

Mr. David Adams (Durham, Consett—Lab.), on March 1, asked the Minister of Transport whether he was aware that the L.N.E.R. had briefed counsel to oppose the applications to be heard on February 28 for public "A" carriers' licences of important and long-established road haulage contractors engaged in transporting fish from North Shields; and whether, as the action of the railway company appeared to conflict with the assurances

given by the railway companies that they had no desire to interfere with other forms of transport, he proposed to take action in this matter.

Dr. Leslie Burgin (Minister of Transport): I have no power to take action on the lines suggested by the hon. member.

Mr. Adams: Does not the Minister agree that his apathy is a distinct encouragement to the railway companies to attack other legitimate forms of transport?

Dr. Burgin: I do not think my saying I have no power to do something is a sign of apathy.

Mr. H. Holdsworth (Bradford South—Lib.-Nat.): Can the Minister consider some alteration of the law which gives people power to put their competitors out of business?

Dr. Burgin: Attempts are being made to reach agreement between the rail and road interests on a number of points, of which this is one. I understand some agreement has actually been reached and has been submitted to the Transport Advisory Council for its views. I sincerely hope that some *modus vivendi* may be arrived at.

### Railway Charges for Merchandise

Sir Frank Sanderson (Ealing—U.), on March 1, asked the Minister of Transport whether he had now considered the memorandum handed to him on December 3, 1938, by the railway companies relating to railway charges for merchandise traffic; and, in view of the extreme urgency of the matter, if he could now state whether the broad proposals which they had put forward were generally approved by him. He further asked the Minister of Transport, whether, in view of the serious decline in railway receipts, and with a view to assisting this industry to maintain its efficiency in peace time, and in view of the wider responsibilities which would inevitably be laid upon it in the event of war, he would consider the immediate repeal of the existing statutory regulation of the charges for the conveyance of merchandise traffic by railway, together with the requirements attached thereto, including classification, publication, and undue preference, so that equality of conditions between all the various forms of transport should prevail.

Dr. Leslie Burgin: I have referred the railway companies' proposals to the Transport Advisory Council and am awaiting its report, which I hope to receive shortly.

## Parliamentary Notes

### L.N.E.R. (Superannuation) Bill

The Railway Clerks' Association has withdrawn its petition against this Bill, which seeks statutory authority for a scheme of consolidation of the superannuation funds of the constituent companies of the L.N.E.R., and also proposes to dissolve Thompson McKay & Co. Ltd., and to provide for the distribution of its assets.



## NOTES AND NEWS

**Collision Near Inverness.**—A goods train northbound from Inverness and a light engine running south from Dingwall collided near Clachnaharry, two miles north of Inverness, L.M.S.R., on February 21, causing slight injuries to the four enginemen and blocking the main north line for several hours.

**Venezuela Central Railway Co. Ltd.**—It is announced in *The London Gazette* that this company was struck off the register of companies on Tuesday, February 28. The company was registered in 1905. The railways worked under a concession from the Venezuelan Government consist of 85 km. on the 3 ft. 6 in. gauge, of which 12½ km. are equipped for electric traction. They run from Caracas to Ocumare, with a branch to Los Chorrros.

**Institute of Transport Dinner.**—The Rt. Hon. Leslie Burgin, M.P., Minister of Transport, is to propose the toast of "The Institute of Transport" at the dinner of the institute tonight (March 3), at the Connaught Rooms, London. Sir Cyril Hurcomb, K.C.B., K.B.E., Past President, will propose the toast of "Our Guests," and Mr. Robertson F. Gibb, who assumed the office of President of the Chamber of Shipping of the United Kingdom yesterday (March 2), will respond.

**Cordoba Central Railway Sale.**—At the adjourned general meetings of the holders of the Cordoba Central Railway Company's 5 per cent. income debenture stock and consolidated income stock held on February 24, the resolutions approving the scheme of arrangement and the sale of the railway to the Argentine Government were duly passed. Similar resolutions having been passed at the general meeting of the holders of the company's first debenture stock held on February 9, the scheme has become effective, and arrangements will now be made with the Argentine Government to complete the purchase.

**New Signalling for Preston, L.M.S.R.**—An extensive scheme of new signalling is to be carried out at Preston, L.M.S.R., through which station passes the whole of the Blackpool seasonal traffic as well as the heavy north-south main-line traffic. At peak periods, as many as 900 trains pass through Preston in 24 hours. Under this scheme multi-aspect colour-light signalling will be provided through Preston station and for a total distance of 3½ miles over the main line from Farington on the south to Oxheys on the north. Alterations will also be made in the track arrangements, and additional through lines provided for passenger trains. Two large new power signal boxes are to be constructed, one at the North end of Preston station and the other at the South end. The former will do the work of two existing boxes and the latter of five existing boxes. The new signalling system will benefit in varying degrees all trains

passing through Preston, including those using the main line to and from Scotland and between Liverpool, Manchester, and other parts of Lancashire and from Yorkshire and the Blackpool district. This scheme is one of the signalling works approved by the Minister of Transport as coming within the Government Loan Guarantee arrangement under the Railways (Agreement) Act of 1935.

**Pullman Car Income Stock.**—The Pullman Car Co. Ltd. has issued a circular to the holders of its 5 per cent. income stock stating that it has funds available for the purchase of stock which falls due for redemption during this year, and that it is prepared to receive offers from stockholders who are willing to sell their stock. The company has already acquired an amount at the average price of £77 per cent. At the close of the financial year ended September 30 last there was £404,201 of this stock outstanding.

**L.M.S.R. (London) Golfing Society.**—The twelfth annual dinner of the L.M.S.R. (London) Golfing Society was held at the Stephenson Rooms, Euston Hotel, on Friday, February 24, attended by a company of 64 members and guests. An excellent dinner was followed by a musical programme, interspersed with interesting speeches and the presentation by the Captain of the society (Mr. W. A. Stanier) of the trophies competed for during 1938; the winners were:—

Captain's prize, Mr. F. Roberts; "Stamp" challenge cup, Mr. F. Roberts; "Roberts" challenge cup, Mr. H. Davis; "Hunt" challenge cup, Mr. Howard Williams; "Gee" challenge cup, Mr. F. R. Cawdell; "Irwin" challenge cup, Mr. F. J. Finney and Mr. W. B. Richards; "Reid" challenge cup, Mr. J. W. F. Noton; Society's prize, Mr. J. W. Mellings.

Among the members present were: Messrs. F. W. Baker, A. F. Bound, H. J. Burcham, E. H. D'E. Darby, F. S. Darby, A. W. Donaldson, A. Eddy, C. E. Fairburn, J. W. Harris, C. N. Mansfield, G. Morton, H. V. Mosley, F. Roberts, H. E. Roberts, F. Smith, C. H. Sutherland, S. J. Symes, and W. Wood.

Visitors included: Messrs. F. R. E. Davis (G.W.R.), L. C. Glenister (L.N.E.R.), G. W. Miskin and J. H. Howarth (St. Albans G.C.), T. E. Argile, W. H. C. Clay, S. O. Cotton, Vernon Gee, S. A. Parnwell, T. W. Royle, H. L. Thornhill, W. E. Thornhill, W. K. Wallace, and Jas. Wilson.

**London Transport Posters.**—With the main line of the Metropolitan Railway, London Transport provides a frequent service to a district that is an inexhaustible source of pleasure to lovers of the country dwelling in town and the suburbs. Only 37 minutes in the train on an average separate Rickmansworth from Baker Street, and arrived there the traveller is on the threshold of the Chiltern country and the Chess Valley. A new poster issued by the board reflects the rural spirit of the area in a picture by Clare Leighton of woodcutters at work on a felled tree trunk, appearing over the title "The Country Now" and the reminder that cheap return tickets to the neighbourhood are issued daily at all Metropolitan Line

stations. Another new poster by the same artist advertises the "Country Walks" booklets published by the board. The design shows a shepherd tending his flock against a background of hills and stormclouds in a twilight sky.

**Closing of Maxwelltown Station.**—On March 1 Maxwelltown station on the Dumfries—Stranraer line of the L.M.S.R. was closed for ordinary passenger traffic. Goods traffic will continue to be dealt with, and football specials will call at the station when required.

**Irish Railway Operating Ratios.**—The respective percentages of working expenses in relation to traffic receipts on the following Irish railways in the year 1938 were: County Donegal 81.85; Great Southern 92.41; Great Northern 98.80; Belfast & County Down 103.42; Northern Counties Committee 105.98; Sligo, Leitrim & Northern Counties 108.85; Londonderry & Lough Swilly 121.90. The operating ratio of the Clogher Valley Railway for the year ended September 30, 1938, was 264.64 per cent.

**Tokio Railway Museum.**—The new building of the Railway Museum at Tokio, which was constructed by the Engineering Department of the Japanese Government Railways, and opened on April 25, 1936, has proved a great attraction to the ordinary public as well as to railwaymen. The ferro-concrete three-storey building has an aggregate floor area of 5,518 square metres. It is situated in the Manseibase station in Tokio, about 2 km. north of Tokio Central station. In the year of its opening 690,000 people visited the museum.

### "South Africa and the Southern."

—On Thursday, February 9, Mr. R. M. T. Richards, Assistant Traffic Manager, Southern Railway, presented an interesting and instructive lecture on "South Africa and the Southern," to a large gathering of the Southern Railway Lecture and Debating Society, at the Chapter House, S.E.1. The Rt. Hon. Sir George L. Courthope, Bt., M.P. (Director) was in the chair, supported by Mr. E. J. Missenden, O.B.E., Traffic Manager. Many other officers of the company were present. The lecture was accompanied by numerous slides from photographs taken by the author, and two films.

### London Transport Area Fares.

—The sitting of the Railway Rates Tribunal to hear the application of the main-line railways and the London Passenger Transport Board for an increase of 5 per cent. in fares in the London Transport Area has been fixed for March 20. For the purposes of this hearing, Sir Maurice Jenks and Mr. Dallas Bernard have been appointed additional members of the tribunal under a provision of the London Passenger Transport Act, 1933, which requires two special members to sit with the usual members when matters affecting the London Passenger Transport Board are under review.

## An Unveiling Ceremony in the City of London

One of the pleasant little ceremonies which serve to remind Londoners in a picturesque way of the history and traditions of their city, was performed at 12.30 p.m. last Wednesday, in Panyer Alley, which runs between Newgate Street and Paternoster Row. The occasion was the unveiling and restoration to the site it had occupied for two and a half centuries of the small sculptured figure known as "The Naked Boy of Panyer Alley," which had been removed for safety during the reconstruction of St. Paul's (former Post Office) station. Officials from Vintners' Hall—the Boy belongs to the Vintners' Company—were present in their traditional robes.

Mr. Frank Pick, Vice-Chairman, London Passenger Transport Board, deputised for Lord Ashfield, who is indisposed. Other London Transport officials who attended included:—

Messrs. T. E. Thomas, General Manager (Road Transport); V. A. M. Robertson, Chief Engineer (Civil); Evan Evans, Operating Manager (Railways); S. A. Heaps, Architect; F. Scothorne, Asst. Public Relations Officer.

The undermentioned guests were also present:—

The Dean of St. Pauls—Dr. Matthews, Alderman Frank Newson-Smith, Senior Deputy Alderman Colonel C. W. Whittaker, Sir Hugh Turnbull—Commissioner of Police for the City of London, Messrs. Geoffrey L. Groves (Mott, Hay & Anderson, consulting engineers), F. N. G. Taylor (Director, Charles Brand & Son Ltd., contractors), H. B. Kerr (Managing Director, James Carmichael (Contractors) Limited), F. D. Bone.

When the covering, on which were the Vintners' arms and motto—*Vinum exultat animum*—was drawn aside, it was seen that the appearance of the boy had not been impaired by his enforced exile in Vintners' Hall. He bears an inscription, not quite accurate, which reads:—

When ye have sought the City round  
Yet still is this the highest ground  
August the 27 1688

After the ceremony guests adjourned to the Empire Building nearby, where Mr. Pick made a short speech thanking the Vintners' Company for its help in the reconstruction of St. Paul's station.

## British and Irish Railway Stocks and Shares

Stocks	Highest 1938	Lowest 1938	Prices	
			Mar. 1, 1939	Rise Fall
G.W.R.				
Cons. Ord. ...	65½	25¾	27½*	+1
5% Con. Prefce....	118¾	74	83*	+10
5% Red.Pref.(1950)	111¾	90	88*	+4½
4% Deb. ...	111	97½	98½	—
4½% Deb....	112½ <sup>16</sup>	100½	101	—
4½% Deb....	118½	104	106	—
5% Deb. ...	131½	119	115½	—
2½% Deb. ...	69¾	60	61½	—
5% Rt. Charge ...	129	114	110	+4
5% Cons. Guar. ...	128½	103	104*	+4
L.M.S.R.				
Ord. ...	30½	11	13	+1½
4% Prefce. (1923)...	70¼	23	32	+5
4% Prefce. ...	82¼	43¾	53½*	+5
5% Red.Pref.(1955)	103½	66	74½*	+6
4% Deb. ...	105½ <sup>16</sup>	85	90½	+2
5% Red.Deb.(1952)	114½	105	106½	+2
4% Guar. ...	102¾	77½	81½*	+5
L.N.E.R.				
5% Pref. Ord. ...	89½ <sup>16</sup>	3½	4½	+½
Def. Ord. ...	47½	2½ <sup>16</sup>	3	+½
4% First Prefce.	68¼	21	28½	+5½
4% Second Prefce.	27¼	8	11	+1½
5% Red.Pref.(1955)	97	40¼	47½	+5
4% First Guar. ...	97½	66¼	68½	+5
4% Second Guar. ...	91¼	52	58½	+9
3% Deb. ...	79¼	60	64½	—
4% Deb. ...	104½	77	84½	—
5% Red.Deb.(1947)	110½	97	105½	—
4½% Sinking Fund Red. Deb.	108½ <sup>16</sup>	101	102	—
SOUTHERN				
Pref. Ord. ...	87	47½	65½*	+5
Def. Ord. ...	21¾	9¼	14	+2½
5% Pref. ...	115	83	93½*	+5
5% Red.Pref.(1964)	115½	98	95½*	+1
5% Guar. Prefce.	128½	106	108½*	+2
5% Red.Guar.Pref. (1957)	116	109½	108½*	+2
4% Deb. ...	109¼	95	97½	—
5% Deb. ...	129	117	113½	—
4% Red. Deb. 1962-67	107	101½	100	—
BELFAST & C.D.				
Ord. ...	4	3½	4	—
FORTH BRIDGE				
4% Deb. ...	102	99½	96½	—
4% Guar. ...	103¼	94½	95	—
G. NORTHERN (IRELAND)				
Ord. ...	5½	2½	3¼	—
G. SOUTHERN (IRELAND)				
Ord. ...	25½	8½	10	—
Prefce. ...	35	13	12	—
Guar. ...	70¼	30½ <sup>32</sup>	30	—
Deb. ...	83	56	50¼	+¼
L.P.T.B.				
4½% "A" ...	119½	107½	111½	—
5% "A" ...	130	117	119½	—
4½% "T.F.A." ...	108	98	103	—
5% "B" ...	122½ <sup>16</sup>	105	111½	—
"C" ...	84	68	73*	+2½
MERSEY				
Ord. ...	24¼	16½	22	+1
4% Perp. Deb. ...	102½	94½	94½	—
3% Perp. Deb. ...	77	69	66½	—
3% Perp. Prefce.	66½	57	55	—

## British and Irish Traffic Returns

GREAT BRITAIN	Totals for 8th Week			Totals to Date		
	1939	1938	Inc. or Dec.	1939	1938	Inc. or Dec.
L.M.S.R. (6,831½ mls.)	£	£	£	£	£	£
Passenger-train traffic...	398,000	407,000	— 9,000	3,024,000	3,100,000	— 76,000
Merchandise, &c. ...	452,000	482,000	— 30,000	3,363,000	3,838,000	— 475,000
Coal and coke ...	303,000	315,000	— 12,000	2,461,000	2,505,000	— 44,000
Goods-train traffic ...	755,000	797,000	— 42,000	5,824,000	6,343,000	— 519,000
Total receipts ...	1,153,000	1,204,000	— 51,000	8,848,000	9,443,000	— 595,000
L.N.E.R. (6,315 mls.)						
Passenger-train traffic...	261,000	264,000	— 3,000	2,014,000	2,057,000	— 43,000
Merchandise, &c. ...	322,000	360,000	— 38,000	2,310,000	2,702,000	— 392,000
Coal and coke ...	273,000	287,000	— 14,000	2,131,000	2,270,000	— 139,000
Goods-train traffic ...	595,000	647,000	— 52,000	4,441,000	4,972,000	— 531,000
Total receipts ...	856,000	911,000	— 55,000	6,455,000	7,029,000	— 574,000
G.W.R. (3,737½ mls.)						
Passenger-train traffic...	163,000	163,000	—	1,284,000	1,297,000	— 13,000
Merchandise, &c. ...	193,000	195,000	— 2,000	1,434,000	1,566,000	— 132,000
Coal and coke ...	116,000	133,000	— 17,000	928,000	1,041,000	— 113,000
Goods-train traffic ...	309,000	328,000	— 19,000	2,362,000	2,607,000	— 245,000
Total receipts ...	472,000	491,000	— 19,000	3,646,000	3,904,000	— 258,000
S.R. (2,140 mls.)						
Passenger-train traffic...	261,000	264,000	— 3,000	2,068,000	2,078,000	— 10,000
Merchandise, &c. ...	60,000	63,500	— 3,500	432,000	472,500	— 40,500
Coal and coke ...	38,000	42,500	— 4,500	300,000	310,500	— 10,500
Goods-train traffic ...	98,000	106,000	— 8,000	732,000	783,000	— 51,000
Total receipts ...	359,000	370,000	— 11,000	2,800,000	2,861,000	— 61,000
Liverpool Overhead ...	1,211	1,311	— 100	10,815	10,865	— 50
Mersey (4½ mls.) ...	4,330	4,152	+ 178	35,865	35,057	+ 808
*London Passenger Transport Board ...	560,300	553,500	+ 6,800	19,829,400	19,621,400	+ 208,000
<b>IRELAND.</b>						
Belfast & C.D. pass. (80 mls.)	1,610	1,595	+ 15	13,380	13,231	+ 149
" " goods	419	514	— 95	3,304	3,426	— 122
" " total	2,029	2,109	— 80	16,684	16,657	+ 27
Great Northern pass. (543 mls.)	7,450	7,350	+ 100	62,400	63,600	— 1,200
" " goods	9,700	8,500	+ 1,200	72,700	65,750	+ 6,950
" " total	17,150	15,850	+ 1,300	135,100	129,350	+ 5,750
Great Southern pass. (2,076 mls.)	26,454	27,068	— 614	217,876	220,205	— 2,329
" " goods	41,125	38,948	+ 2,177	319,762	331,313	— 11,551
" " total	67,579	66,016	+ 1,563	537,638	551,518	— 13,880

\* 35th week (before pooling)

\* ex dividend

## CONTRACTS AND TENDERS

### Beyer-Garratts for Rhodesia

Beyer, Peacock & Co. Ltd. has received an order from the Rhodesia Railways for four heavy passenger Beyer-Garratt locomotives for the Mafeking-Bulawayo section. This section, which is 484 miles long, is laid with 60-lb. rail. As there are no running sheds in between, a caboose carrying a change of crew is run on the trains and the engine is thus enabled to make a round trip of nearly 1,000 miles. The wheel arrangement is to be 4-6-4 + 4-6-4, the coupled wheels 4 ft. 9 in. in dia., and the tractive effort at 85 per cent. boiler pressure about 43,000 lb. These locomotives will be the most powerful passenger engines in the world operating on this weight of rail. The maximum axleload is to be 13½ tons. The engines are particularly required for operating the Cape Town and Rhodesia mail and boat trains known as the Rhodesian Express and the Rhodesia Limited. The weight of train is to be 550 tons, and the maximum speed 50 m.p.h. The total weight of the locomotives will be approximately 174 tons.

Babcock & Wilcox Limited has received an order from the Crown Agents for the Colonies for four electrically operated portal lifting gib cranes comprising three 5-ton and one 7-ton capacity, for service at Kilindini Harbour, Kenya & Uganda Railways & Harbours Administration.

### Portable Generating Sets for India

The North Western Railway of India has ordered two generating sets installed in rail coaches for use in outstations where a temporary supply is required. As a portable power station, this plant can supply d.c. two or three wire systems, and a.c. three-phase, four-wire systems. The sets are driven by Ruston & Hornsby diesel engines. One set consists of a Ruston 80-b.h.p. four-cylinder diesel engine driving a Crompton Parkinson screen protected, revolving armature alternator 25-kW. 0.8 P.F. 420/240 volts, three-phase four-wire, 50 cycles, 750 r.p.m. and a Crompton Parkinson screen protected, level compound wound, three-wire d.c. generator with split series winding, 25 kW. 480/240 volts, 75 r.p.m., with protected short circuiting switch and static balancer for 25 per cent. out-of-balance current. The two machines are coupled together and arranged for flexible coupling to the engine. A "V" driven (belt) exciter is provided for the alternator and also a "V" belt-driven battery-charging generator having an output of 8.25 kW. 150 amps., 30/55 volts, 1,500 r.p.m. The other generating set consists of a similar arrangement, the engine in this case, however, being a Ruston 30-b.h.p. three-cylinder diesel; the alternator 10 kW. 1,000 r.p.m. and the d.c. generator 10 kW. 480/240 volts three-wire 1,000 r.p.m. As in the first

instance, this set is also provided with "V" belt-driven exciter and "V" belt-driven battery-charging generator. This arrangement of the belt-driven exciters and belt-driven battery-charging generators is rather unusual. The switchboards were built in Bombay.

### Central of Brazil Contracts

The Central Railway of Brazil has been authorised by Presidential Decree to contract with the Comptoir des Acières Belges for the supply of 500,000 m. (sufficient for approximately 155 miles of track) of 100-lb. rails (49.6 kg. per m.) and all fittings. The contract is to be made in sterling and must not exceed £466,000 payable in instalments until 1943, in paper milreis calculated at current rate of exchange on the day of payment. It is also expected that tenders will shortly be invited for the supply of 25 locomotives, 700 wagons, and 300 coaches.

### G.W.R. Contracts

The directors of the Great Western Railway Company have authorised the placing of the following contracts:—

Scammell Lorries Limited: Supply of six six-ton Scammell tractors and twelve six-ton Scammell trailer chassis.

The Wharton Crane & Hoist Co. Ltd.: Supply and erection of one six-ton electric overhead travelling crane for the Barry Foundry.

The Automatic Telephone & Electric Co. Ltd.: Provision and installation of automatic and manual telephone exchange at Exeter (St. David's) station.

Tersons: Supply and erection of new boiler house and gantry at Old Oak Common.

McManus & Co. Ltd.: Alterations to station buildings at Slough.

At Swindon Works—

J. Lang & Sons Ltd.: Provision of a 17-in. swing sliding, surfacing, and screw-cutting lathe in "R" (Machine) Shop, Locomotive Works.

Denham's Engineering Co. Ltd.: Provision of a 10½-in. centres sliding, surfacing, and screw-cutting lathe in "AM" (Machine) Shop, Locomotive Works.

W. G. Bagnall Limited has received an order from the Rohilkund & Kumaon Railway to the inspection of Messrs. Rendel, Palmer & Tritton for the supply of five pairs of engine frames for 4-6-0 passenger and mixed-traffic locomotives.

Leyland Motors Limited has received an order from Central S.M.T. Co. Ltd. for eleven oil-engined single-decked passenger road vehicles.

Lysholm-Smith hydraulic torque converter transmission, similar to that incorporated in Leyland gearless buses supplied to many Scandinavian bus operators, is to be fitted to the 2,000-b.h.p. diesel locomotive now being built in Germany for express service on the Oslo-Bergen route of the Norwegian State Railways. Over 2,000 Leyland torque converter units have been built for bus and railcar operation.

The Chief Controller of Stores, Indian Stores Department, New Delhi, is calling for tenders (Order No. H-680) receivable by March 20 for the supply and delivery as and when required during the year ending August 15,

1940, of quantities of rubber fittings for railway carriages. The requirements include window pads and basin stops.

### South African Inquiry for Battery Locomotives

With reference to the call for tenders by the South African Railways & Harbours Administration for the supply of four battery-operated electric locomotives, tenders must now be received by March 28.

Tenders are invited by the Bengal & North Western Railway Administration, receivable at 237, Gresham House, Old Broad Street, London, E.C.2, by March 28, for the supply of five boilers for "P" class superheated locomotives.

### New Telephone Exchange for Sheffield Victoria Station, L.N.E.R.

The L.N.E.R. is to instal an entirely new and up-to-date telephone exchange at Sheffield Victoria station. The present telephone facilities consist of a railway switchboard at Victoria station, joint railway and Post Office switchboards at the Bridgehouses goods depot, and a number of Post Office exchange lines and extensions. The existing switchboards are to be replaced by a combined automatic and manual switchboard in the telegraph office, with connections to the various offices on the passenger station and the three Sheffield goods depots. Post Office calls will be concentrated on the new switchboard and all offices will have both railway and Post Office telephone connections.

**ALUMINIUM CONSUMPTION.**—In 1938 the consumption of aluminium in the United Kingdom reached the record figure of approximately 65,000 long tons, an increase of about 35 per cent. over the figure for 1937, and of 88 per cent. over that for 1936. About 80 per cent. of our aluminium supplies last year were imported as metal; imported bauxite accounted for the production of most of the remainder. The exports for 1938 from the United Kingdom showed a decrease on those for the previous year; the figures for 1938 were 6,326 tons, against 10,191 tons for 1937.

**GERMAN RAILWAY EQUIPMENT PROGRAMME.**—It is reported that a comprehensive improvement programme has been approved to enable the German State Railway to keep abreast of the rapid industrial development of the country, which at the moment it is hardly able to do. Within the next few years RM. 10,000,000,000 (about £800,000,000) will have to be spent, of which RM. 621,000,000 is required on account of new rolling stock ordered this year, and including 1,000 steam locomotives. The railway reconstruction required in connection with the big town planning programmes and the rehabilitation and improvement of the Austrian and Sudetenland railways will account for the greater part of the capital sum mentioned.



### The Bengal and North Western Railway Company Limited

**T**HE Directors are prepared to receive Tenders for the supply of:—  
5 Locomotive Boilers, P Class, superheated, as per specification to be seen at the Company's Offices.

Tenders addressed to the undersigned, and envelope marked "Tender for Boilers," with the name of the firm tendering, to be lodged not later than noon on the 28th day of March, 1939.

For each specification a fee of 10s. will be charged, which cannot, under any circumstances, be returned.

The Directors do not bind themselves to accept the lowest or any tender.

By Order of the Board,

J. WILLIAMSON,

Managing Director.

237, Gresham House,  
Old Broad Street,  
London, E.C.2.  
27th February, 1939.

### Egyptian Government

#### APPOINTMENT OF A CHIEF LOCOMOTIVE INSPECTOR.

**A**PPPLICATIONS are invited for appointment of a Chief Locomotive Inspector in the Mechanical Department of the Egyptian State Railways Administration.

Applicants must be of British Nationality, between 35-45 years of age, and possess the following qualifications:—

Must have been a fully qualified Main Line Driver with a recognised Railway Company. Must be capable of instructing Drivers and Firemen in their footplate duties and able to train Senior Drivers for duties as Locomotive Inspectors.

Must have had experience of Locomotive Inspector's duties.

The salary offered is £E450 per annum (£E1 = £1 0s. 6d. approx.).

Appointment will be on contract for three years, commencing on the day of reporting for duty in Cairo.

The appointment is subject to medical examination in London and approval of the Authorities in Egypt.

The selected candidate shall be entitled to receive, on arrival, the cost of his journey from

England to Egypt and similarly the cost of his return journey.

Third class fares and reasonable out of pocket expenses will be paid to applicants who are requested to attend for interview and/or medical examination in London.

Application and specimen contract forms may be obtained from:—

THE CHIEF INSPECTING ENGINEER,

Egyptian Government,

41, Tothill Street,

London, S.W.1.

to whom they should be returned, with full particulars as to education, qualifications, previous experience, personal reference and copies (not originals) of certificates or testimonials.

Envelopes to be inscribed Chief Locomotive Inspector.

### Egyptian Government

#### APPOINTMENT OF A CHIEF BOILER SHOP FOREMAN.

**A**PPPLICATIONS are invited for appointment of a Chief Boiler Shop Foreman in the Mechanical Department of the Egyptian State Railways Administration.

Applicants must be of British Nationality (between 30-40 years of age), and possess the following qualifications:—

Must have served a regular boilermaker apprenticeship in the Locomotive Workshops of a recognised Railway Company or a firm building and supplying locomotive boilers, with a subsequent experience as a journeyman boilermaker.

Must have had experience on the examination and maintenance repairs to locomotive boilers with a recognised Railway Company and be qualified to examine and report on the conditions of locomotive boilers, assess maintenance repairs required to supervise the carrying out of such repairs, and to test and pass locomotive boilers for service after such repairs.

Must have had experience in the control of labour and held a post in a supervising capacity.

Besides experience in boiler shop maintenance repair work experience in the inspection and maintenance repairs of locomotive boilers in the Running Department of a recognised Railway is desirable.

The salary offered is £E500 per annum, to be increased to £E548 after two years' service (£E1 = £1 0s. 6d. approx.).

Appointment will be on contract for five

years, commencing on the day of reporting for duty in Cairo.

The appointment is subject to medical examination in London and approval of the authorities in Egypt.

The selected candidate shall be entitled to receive, on arrival, the cost of his journey from England to Egypt, and similarly the cost of his return journey.

Third class fares and reasonable out of pocket expenses will be paid to applicants who are requested to attend for interview and/or medical examination in London.

Application and specimen contract forms may be obtained from

THE CHIEF INSPECTING ENGINEER,

Egyptian Government,

41, Tothill Street,

London, S.W.1.

to whom they should be returned, with full particulars as to education, qualifications, previous experience, personal references and copies (not originals) of certificates or testimonials.

Envelopes to be inscribed Chief Boiler Shop Foreman.

### Crown Agents for the Colonies

#### COLONIAL GOVERNMENT APPOINTMENTS.

**A**PPPLICATIONS from qualified candidates are invited for the following post:—

#### ASSISTANT ENGINEER

required for the Gold Coast Government Railway for two tours of 12 to 24 months with possible permanency. Salary £475 a year for two years then £500—£25—£600—£30—£840 a year and then subject to promotion to a vacancy by annual increments of £40 to £1,000 a year. Free passages and quarters and liberal leave on full salary. Candidates, age 25-35, must be Corporate Members of the Institution of Civil Engineers or possess an engineering degree recognised as granting exemption from Sections A and B of the A.M.I.C.E. examination, and must have had practical experience on a British Railway. Preference will be given to candidates who have had, in addition to the above qualifications, practical experience in harbour maintenance.

Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience and mentioning this paper, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/8299.

## Railway and Other Reports

**Consolidated Signal Co. Ltd.**—A final dividend on the ordinary stock of 36½ per cent., less tax at 5s. 5-2912d., is recommended for the year ended September 30, 1938, the same as for the previous year. The net profit was £49,606, against £51,416.

**Vickers Limited.**—The directors give notice of the following final dividends: 2½ per cent. actual, less income tax at 5s. 6d. in the £, on the preferred 5 per cent. stock; 2½ per cent. actual, less income tax at 5s. 6d. in the £, on the 5 per cent. preference stock; 2½ per cent. actual, free of income tax, on the cumulative preference stock, making in each case 5 per cent. for the year ended December 31, 1938. Payment will be made on March 24.

**Salvador Railway.**—The report for the year ended June 30, 1938, shows a working loss of £950, against a surplus in 1936-37 of £13,273. After crediting profit on exchange and charging interest and trustees' remuneration, there is a net debit balance of £1,015, which is added to the debit balance forward, raising this to £77,943, to which has to be added £7,749 for special expenditure on hurricane damage. The General Manager reports that the gross earnings

are the worst that have ever been made, and, despite economies, the working ratio is up again from 80.97 per cent. to 93.68 per cent. The railcars recently introduced are popular and there is an increase in first class travel. In second class, however, there is a serious decrease, due to trade depression rather than to road competition. Goods traffic showed a serious loss, owing to the decreased coffee crop and consequent all-round decline in business. Prospects, however, are better.

## Forthcoming Events

Mar. 3 (Fri.).—Institute of Transport (London), at Connaught Rooms, Great Queen Street, W.C.2, 7 for 7.30 p.m. Annual Dinner.

Mar. 4 (Sat.).—Permanent Way Institution (Manchester-Liverpool), at Technical Inst., Byrom Street, Liverpool, 3 p.m. "Supply of Permanent Way Materials," by Mr. P. Hickman.

Mar. 6 (Mon.).—G.W.R. (Birmingham) Lecture and Debating Society, at Great Western Hotel, Snow Hill Station, 6.30 p.m. Lecture by Mr. S. Kaines Smith.

Permanent Way Institution (London), at Underground Railways' Dining Club, Pelham Street, S.W.7, 7 p.m. Visit of the President. "My Indian Visit: A pictorial Survey," by Mr. R. Carpmael, O.B.E.

Society of Engineers, at Geological Society, Burlington House, Piccadilly, London, W.1, 6 p.m. "The Design and Maintenance of Civil Engineering Works on American and Canadian Railways," by Mr. V. Robertson.

Mar. 7 (Tues.).—Permanent Way Institution (Brighton), at Mess Room, New England

Street, 7 p.m. "American Permanent Way Practice," by Mr. S. Rock.

Permanent Way Institution (York), at Railway Inst., Queen Street, 6.30 p.m. "Some Recent Developments in Permanent Way Practice," by Mr. R. Booth.

Mar. 8 (Wed.).—Institution of Locomotive Engineers (London), at Inst. of Mechanical Engineers, Storey's Gate, S.W.1, 6 p.m. Discussion: "The Advantages of a System of Continuous Blow-down for Locomotive Boilers."

Mar. 8-9.—Institute of Metals, at Inst. of Mechanical Engineers, Storey's Gate, London, S.W.1, 10 a.m. Annual Meeting.

Mar. 9 (Thurs.).—Retired Railway Officers' Society, at Charing Cross Hotel, W.C.2, 12.45 for 1 p.m. Spring Luncheon.

Railway Club, at Royal Scottish Corporation, Hall, Fetter Lane, London, E.C.4, 7.30 p.m. "The Use of Steel Sleepers on British Railways," by Mr. A. Webber.

Mar. 10 (Fri.).—Institute of Transport (Manchester-Liverpool), at Queen's Hotel, Manchester, 6.30 p.m. "Recent Legal Decisions Affecting Transport," by Mr. J. Thomas.

Institute of Transport (Newcastle), at Royal Station Hotel, 8 p.m. "The Ancillary Services of the Railway Companies," by Mr. M. Sifton.

Institution of Civil Engineers, Great George Street, London, S.W.1, 7 p.m. "Factors Contributing to Comfort in Travel": Section I: "By Road," by Mr. Sidney E. Gareke, M.I.Mech.E. Section II: "By Rail," by the Rt. Hon. Lord Stamp, G.C.B. Section III: "By Air," by Capt. E. W. Percival, M.R.Ae.S.

Institution of Civil Engineers (Glasgow), at Inst. of Engineers and Shipbuilders, 36, Elmbank Crescent, 7.30 p.m. "The Storm Bridge, Denmark," by Messrs. G. Maunsell and J. Pain.

## Railway Share Market

The general trend on the Stock Exchange has continued to be dominated by the belief that trade conditions should respond to the hopeful views in regard to the Budget and the easing of tension in international affairs.

Railway securities attracted increased attention and moved in favour of holders, but activity was confined to the stocks of the home railways, sentiment in regard to which has benefited from the impression created by the statements at the annual meetings that improved results are expected this year. There seems a reasonable prospect of further economies being effected, while it is realised that traffic receipts should respond readily to any sustained recovery in general trade conditions. Ordinary stocks have shown a much better tendency this week, although they were inclined to ease following publication of the traffic figures on Wednesday. Preference stocks were favoured, and better demand was reported for prior charge securities than for some time past, it being more generally realised that, with

few exceptions, they offer favourable yields when compared with other fixed interest-bearing stocks carrying equivalent investment merits. Great Western ordinary was good around 27½, while the 5 per cent. preference transferred around 83 and the 5 per cent. guaranteed around 103½. The 4 per cent. debentures were quoted at 99. L.M.S.R. issues again came in for a good deal of attention. The 1923 preference was favoured, and changed hands up to 34 at one time, on the view that there would be good prospects of this stock returning to the dividend list if there were reasonable improvement in the railway position this year. The 4 per cent. preference was active at 54, and more attention was also given to the redeemable preference stock. The 4 per cent. guaranteed moved up to 82, and the 4 per cent. debentures were better at 90½.

L.N.E.R. first guaranteed was good at 68½, as was the second guaranteed at 56½, while the first preference rallied to 29, buyers being attracted by the apparently

generous yields on the guaranteed issues. The 3 per cent. debentures also seem relatively undervalued, although the price has improved moderately to 65½ this week. Southern preferred ordinary transferred actively up to 66½ and the deferred was also higher on balance at 13½, while the 5 per cent. preference moved up to 92½, the 5 per cent. guaranteed to 108 and the 4 per cent. debentures were 97. London Transport "C" was more active at the higher level of 74½.

Among Argentine railway issues the ordinary stocks and debentures of the B.A. Great Southern, Central Argentine and B.A. Western improved, but in most cases the preference stocks were relatively dull. The market is not expecting that Argentine railway securities will become active unless there is a sustained rise in traffic. Elsewhere, Nitrate Rails showed a small gain. Under the lead of Union Pacific and Atchison, American railway shares improved, while Canadian Pacific common shares and preference stock were moderately better on balance.

### Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

Railways	Miles open 1938-39	Week Ending	Traffics for Week		No. of Weeks	Aggregate Traffics to Date			Shares or Stock	Prices						
			Total this year	Inc. or Dec. compared with 1938		Totals		Increase or Decrease		Highest 1938	Lowest 1938	Mar. 1, 1939	Yield % (See Note)			
						This Year	Last Year									
South & Central America	Antofagasta (Chili) & Bolivia	834	26.2.39	£ 11,480	—	£ 9,060	8	100,110	144,650	—	£ 44,540	Ord. Stk.	14	71½	7	Nil
	Argentine North Eastern	753	25.2.39	8,170	+	1,204	35	337,462	324,747	+	12,715	A. Deb.	82	2	31½	Nil
	Argentine Transandine	—	—	—	—	—	—	—	—	—	—	6 p.c. Deb.	8	7	7	Nil
	Bolivar	174	Jan., 1939	3,400	—	200	4	3,400	3,600	—	200	Bonds	10	4	5	91½
	Brazil	—	—	—	—	—	—	—	—	—	—	Ord. Stk.	61½	31½	4	Nil
	Buenos Ayres & Pacific	2,806	25.2.39	112,903	+	620	35	2,848,950	2,959,557	—	110,607	Mt. Deb.	151½	8	121½	Nil
	Buenos Ayres Central	190	11.2.39	862,900	—	£ 849,000	33	83,537,200	84,045,100	—	£ 507,900	Ord. Stk.	176½	8½	91½	Nil
	Buenos Ayres Gt. Southern	5,082	25.2.39	149,256	—	60,545	35	4,827,853	5,104,465	—	276,612	"	12½	5	71½	Nil
	Buenos Ayres Western	1,930	25.2.39	45,223	+	7,072	35	1,505,706	1,590,757	—	85,051	"	13½	5½	81½	Nil
	Central Argentine	3,700	25.2.39	124,302	+	7,813	35	3,978,378	4,371,885	—	393,507	"	6	2½	3½	Nil
	Do.	—	—	—	—	—	—	—	—	—	—	Dfd.	3	1½	18½	Nil
	Cent. Uruguay of M. Video	972	18.2.39	20,057	—	1,459	34	616,564	597,825	+	18,739	Ord. Stk.	3	3½	21½	Nil
	Cordoba Central	1,218	—	—	—	—	—	—	—	—	—	Ord. Inc.	3½	3½	21½	Nil
	Costa Rica	188	Dec., 1938	26,266	—	5,618	26	138,866	155,206	—	16,340	Stk.	28	22½	21½	95½
	Dorada	70	Jan., 1939	13,300	—	4,400	4	13,300	17,700	—	4,400	1 Mt. Db.	105¼	104	103½	51½
	Entre Rios	810	25.2.39	12,153	—	1,705	35	545,003	506,931	+	38,072	Ord. Stk.	71½	3½	4½	Nil
	Great Western of Brazil	1,092	25.2.39	10,100	+	1,600	8	93,400	77,000	+	16,400	Ord. Sh.	3½	1½	4½	Nil
	International of Cl. Amer.	794	Jan., 1939	\$548,273	+	\$61,132	4	\$548,273	\$487,141	+	\$61,132	1st Pref.	6d.	6d.	1½	Nil
	La Guaira & Caracas	—	—	—	—	—	—	—	—	—	—	Stk.	8	61½	7½	Nil
	Leopoldina	22½	Jan., 1939	4,750	+	140	4	4,750	4,610	+	140	Ord. Stk.	4	1	1½	Nil
Mexican	1,918	25.2.39	16,714	—	4,683	8	169,430	158,164	+	11,266	Ord. Stk.	4	1	1½	Nil	
Midland of Uruguay	483	21.2.39	\$351,400	+	\$30,600	7	\$2,251,100	\$2,296,600	—	\$45,500	"	78	1½	1½	Nil	
Nitrate	319	Jan., 1939	9,886	—	2,743	31	64,165	65,353	—	1,188	"	14	1½	1½	Nil	
Paraguay Central	386	15.2.39	5,245	—	3,072	6	14,118	24,747	—	10,629	Ord. Sh.	52½	19½	16½	61½	
Peruvian Corporation	274	25.2.39	\$2,626,000	—	\$849,000	35	\$105,487,000	\$109,249,000	—	\$3,762,000	Pr. Li. Stk.	60	55½	47½	125½	
Salvador	1,059	Jan., 1939	68,313	—	15,436	31	477,766	587,785	—	110,019	Pref.	5½	1½	21½	Nil	
San Paulo	100	18.2.39	432,000	+	47,500	34	468,464	464,537	+	423,089	Pr. Li. Db.	23	20	19½	Nil	
Taitai	153½	19.2.39	28,552	—	1,881	7	199,189	226,067	—	26,878	Ord. Stk.	64	28	22½	17½	
United of Havana	160	Jan., 1939	3,870	—	2,425	31	20,785	28,830	—	8,045	Ord. Sh.	15½	1½	1½	10	
Uruguay Northern	1,353	25.2.39	47,204	—	5,773	35	671,337	735,721	—	64,384	Ord. Stk.	3½	1½	1	Nil	
Uruguay Northern	73	Jan., 1939	983	—	106	31	7,438	6,437	+	1,001	Deb. Stk.	2	1	2	Nil	
Canada	Canadian National	23,721	21.2.39	634,563	—	4,069	7	4,603,491	4,597,830	+	5,661	—	—	—	—	—
	Canadian Northern	—	—	—	—	—	—	—	—	—	4 p.c.	72	60	70½	51½	
	Grand Trunk	—	—	—	—	—	—	—	—	—	4 p.c. Gar.	104	90	98½	41½	
Canadian Pacific	17,186	21.2.39	448,000	—	1,200	7	3,284,400	3,432,600	—	148,200	Ord. Stk.	87½	44½	5½	Nil	
India	Assam Bengal	1,329	10.2.39	44,647	+	681	47	1,305,237	1,200,589	+	104,648	Ord. Stk.	81½	70	74½	4
	Barsi Light	202	10.2.39	2,977	—	3,045	47	121,470	120,735	+	735	Ord. Sh.	601½	541½	55½	78½
	Bengal & North Western	2,108	10.2.39	91,387	+	8,067	19	1,051,680	1,022,234	+	29,446	Ord. Stk.	311	278	267	65½
	Bengal Doars & Extension	161	10.2.39	3,376	—	99	47	131,314	128,395	+	2,919	"	89	83	88½	75½
	Bengal-Nagpur	3,268	10.2.39	216,300	+	5,189	47	6,030,341	6,062,512	—	32,171	"	95½	90	93½	44½
	Bombay, Baroda & Cl. India	3,085	20.2.39	265,125	—	9,300	48	7,826,625	7,905,450	—	78,825	"	112½	95	107½	38½
	Madras & Southern Mahratta	2,967	10.2.39	169,350	+	12,027	47	4,822,224	4,559,802	+	262,422	"	109	97	101½	75½
	Rohilkund & Kumaon	571	10.2.39	16,960	—	1,380	19	196,255	194,160	+	2,095	"	308	285	275	69½
	South Indian	2,531½	31.1.39	122,961	—	8,683	45	3,423,832	3,501,502	—	77,670	"	104	101	101½	4½
	Beira-Umtali	204	Dec., 1938	85,945	—	4,434	13	250,250	276,730	—	26,480	Pr. Sh.	—	—	—	—
Various	Egyptian Delta	620	10.2.39	5,968	—	531	47	197,522	209,611	—	12,089	Pr. Sh.	78	5/6	—	Nil
	Kenya & Uganda	1,625	Jan., 1939	249,402	—	34,642	4	249,402	284,044	—	34,642	B. Deb.	49	41	43½	98½
	Manila	—	—	—	—	—	—	—	—	—	Inc. Deb.	93½	89	93	41½	
	Midland of W. Australia	277	Dec., 1938	16,406	+	1,202	26	92,286	84,335	+	7,951	"	—	—	—	—
	Nigerian	1,900	14.1.39	71,291	—	2,440	42	1,621,235	2,262,737	—	641,502	"	—	—	—	—
	Rhodesia	2,442	Dec., 1938	392,771	—	28,871	13	1,172,139	1,317,239	—	145,100	"	—	—	—	—
	South Africa	13,285	18.2.39	609,594	—	7,448	46	28,810,214	29,861,930	—	1,051,716	"	—	—	—	—
	Victoria	4,774	Nov., 1938	809,628	—	62,552	22	3,874,553	3,832,461	+	42,092	"	—	—	—	—

NOTE.—Yields are based on the approximate current prices and are within a fraction of 1/8

† Receipts are calculated @ 1s. 6d. to the rupee

§ ex dividend

The variation in Sterling value of the Argentine paper peso has lately been so great that the method of converting the Sterling weekly receipts at the par rate of exchange has proved misleading, the amount being overestimated. The statements are based on the current rates of exchange and not on the par value